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HAROLD LEGGETT, PH.D.
SECRETARY

State of Louisiana

DEPARTMENT OF ENVIRONMENTAL QUALITY ENVIRONMENTAL SERVICES

Certified Mail No.:

Agency Interest No. 2218
Activity No. PER20080001

Mr. James A. Price
Area Manager
Praxair, Inc.
P.O. Box 230
Geismar, LA 70734

RE: Part 70 Operating Permit Modification, Geismar Plant, Praxair, Inc., Geismar, Ascension Parish, Louisiana

Dear Mr. Price:

This is to inform you that the permit modification for the above referenced facility has been approved under LAC 33:III.501. The permit is both a state preconstruction and Part 70 Operating Permit. The submittal was approved on the basis of the emissions reported and the approval in no way guarantees the design scheme presented will be capable of controlling the emissions as to the types and quantities stated. A new application must be submitted if the reported emissions are exceeded after operations begin. The synopsis, data sheets and conditions are attached herewith.

It will be considered a violation of the permit if all proposed control measures and/or equipment are not installed and properly operated and maintained as specified in the application.

Operation of this facility is hereby authorized under the terms and conditions of this permit. This authorization shall expire at midnight on the _____ of _____, 2014, unless a timely and complete renewal application has been submitted six months prior to expiration. Terms and conditions of this permit shall remain in effect until such time as the permitting authority takes final action on the application for permit renewal. The permit number and agency interest number cited above should be referenced in future correspondence regarding this facility.

Please be advised that pursuant to provisions of the Environmental Quality Act and the Administrative Procedure Act, the Department may initiate review of a permit during its term. However, before it takes any action to modify, suspend or revoke a permit, the Department shall, in accordance with applicable statutes and regulations, notify the permittee by mail of the facts or operational conduct that warrant the intended action and provide the permittee with the opportunity to demonstrate compliance with all lawful requirements for the retention of the effective permit.

Done this _____ day of _____, 2009.

Permit No.: 0180-00031-V3

Sincerely,

Cheryl Sonnier Nolan
Assistant Secretary

CSN:CXL
cc: EPA Region VI

**AIR PERMIT BRIEFING SHEET
AIR PERMITS DIVISION
LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY**

**Geismar Plant
Agency Interest No. 2218
Praxair, Inc.
Geismar, Ascension Parish, Louisiana**

I. BACKGROUND

Praxair Inc. (Praxair) owns and operates an industrial gas and chemical manufacturing facility in Geismar, Louisiana under Permit No. 0180-00031-V2 issued on January 10, 2008.

II. ORIGIN

A permit application and Emission Inventory Questionnaire (EIQ), dated May 12, 2008, along with supplemental information dated June 11, July 28, & August 14, 2008 and April 8 & 20, 2009, was submitted requesting a Part 70 Operating Permit modification for the Geismar Plant.

III. DESCRIPTION

The Geismar plant consists of the following three processes:

Specialty Gas Process: This process produces 32.85 billion standard cubic feet (scf) of hydrogen and 4.02 billion scf of carbon monoxide annually by reforming natural gas with steam over a nickel catalyst bed. High temperature product gases, including hydrogen, carbon monoxide and carbon dioxide, are cooled in the reformer gas boiler to produce high pressure and medium pressure steam. Carbon dioxide is removed by amine absorption/desorption in a MEA (monoethanolamine) section. The synthesis gas stream is further cooled for removal of water before entering a cryogenic cold box for separation into salable gas streams. Hydrogen product is recovered from the top of the first column in the cold box. Liquid methane and carbon monoxide are separated at a further column in the cold box. Carbon monoxide is distributed by pipeline to customers or is stored in cryogenic storage tanks for further use. Methane is either used as fuel or stored in a cryogenic storage tank as a salable product.

Formaldehyde Process: This process produces 112 million pounds of up to 50 percent strength formaldehyde annually. This process uses air and methanol as raw materials. Oxygen in air is reacted catalytically with methanol to produce formaldehyde gas. The formaldehyde gas is absorbed in water and stored as up to 50% strength solutions in heated cone-roof storage tanks.

Methanol Process: This process produces 96.8 million pounds of methanol annually. Carbon monoxide, carbon dioxide and hydrogen gases are used as raw materials in this process. CO, CO₂ and H₂ are reacted in the presence of the catalyst to produce methanol.

Within the permit application submitted on May 12, 2008, and addendum submitted on June 11, 2008, Praxair proposed the addition of applicable federal requirements and the update of emissions rates for the Methanol Flare (Emission Point No. 2-94).

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Within the permit application addendum submitted on August 14, 2008, Praxair requested the following:

1. Replacement of the existing Catalytic Converter Vent (Emission Point No. 3-93) with new equipment that includes emissions from a natural gas fired startup heater. The replacement Catalytic Converter Vent is Emission Point No. 1-08.
2. Update of regulatory applicability related to NESHAP Subparts G and H.
3. Addition of Insignificant Activity – Methanol Tank.
4. Removal of Cooling Tower – Unit 2 (Emission Point No. 4-01).
5. Addition of a new Cooling Tower – Unit 2 (Emission Point No. 2-08).
6. Reconciliation of emissions from the Unit 1 Cold Box West Flare (Emission Point No. 1-89) and Unit 1 Main Flare (Emission Point No. 3-71).
7. Revise the formaldehyde process description to state that this process produces 112 million pounds of up to 45% strength instead of up to 44% strength formaldehyde annually. This revision is not related to any physical modification or change in the method of operation.

Within the permit application addendum submitted on April 8, 2009, Praxair requested the following:

1. Increase the maximum lb/hr emissions for all pollutants for all the flares, revise emissions for Methanol Flare (Emission Point No. 2-94) to include a vent from a refining column in the Methanol Distillation process.
2. Reconcile the fugitive emissions from the Formaldehyde Plant (Emission Point No. 5-93) and the Methanol Plant (Emission Point No. 8-93) based on an updated component count and VOC speciation.
3. Revise the emissions from the replacement Catalytic Converter Vent (Emission Point No. 1-08) based on changing the hours of operation for the startup heater from 4380 hrs/yr to 8730 hrs/yr.
4. Add emissions from a Tank Truck Unloading Operations –Methanol Plant (Emission Point No. 1-09).
5. Increase maximum lb/hr for the Reformer Flue Gas Stack, Unit 6 (Emission Point No. 9-95) for carbon monoxide (CO), ammonia, and nitrogen oxide (NO_x) emissions based on historical CEMs data.
6. Include Cooling Tower –Unit 2 (Emission Point No. 2-08) from General Permit No. 3070-V0 issued on December 8, 2008.
7. Request addition of a Specific Requirement in air permit for the Reformer Flue Gas Stack, Unit 6 (Emission Point No. 9-95) to allow calculations of NO_x, CO, and ammonia emissions using an alternative methodology when CEMs are inoperable.

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9. Revise the formaldehyde process description to state that this process produces 112 million pounds of up to 50% strength instead of up to 44% strength formaldehyde annually. This revision is not related to any physical modification or change in the method of operation.
10. Revise the emissions from the formaldehyde tanks to represent the storage of up to 50% strength formaldehyde and increased turnover rates for greater operational flexibility.

Estimated emissions from the Geismar Plant in tons per year are as follows:

Pollutant	Before	After	Change
PM ₁₀	64.40	64.45	+0.05
SO ₂	2.23	2.23	-
NO _x	312.93	313.57	+0.64
CO	243.41	248.00	+ 4.59
VOC	57.36	66.41	+ 9.05

LAC 33:III Chapter 51 Toxic Air Pollutants (TAPs):

Pollutant	Before	After	Change
Ammonia	9.42	9.42	-
Formaldehyde	0.58	1.98	+1.40
Methanol	9.72	20.03	+10.31

IV. TYPE OF REVIEW

This application was reviewed for compliance with the Louisiana Part 70 operating permit program, the Louisiana Air Quality Regulations, New Source Performance Standards (NSPS), and National Emission Standards for Hazardous Air Pollutants (NESHAP). Prevention of Significant Deterioration (PSD) review and Nonattainment New Source Review (NNSR) do not apply.

This facility is a major source of toxic air pollutants (TAPs) pursuant to LAC 33:III.Chapter 51.

V. CREDIBLE EVIDENCE

Notwithstanding any other provisions of any applicable rule or regulation or requirement of this permit that state specific methods that may be used to assess compliance with applicable requirements, pursuant to 40 CFR Part 70 and EPA's Credible Evidence Rule, 62 Fed. Reg. 8314 (Feb. 24, 1997), any credible evidence or information relevant to whether a source would have been in compliance with applicable requirements if the appropriate performance or compliance test or procedure had been performed shall be considered for purposes of Title V compliance certifications.

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procedure had been performed shall be considered for purposes of Title V compliance certifications. Furthermore, for purposes of establishing whether or not a person has violated or is in violation of any emissions limitation or standard or permit condition, nothing in this permit shall preclude the use, including the exclusive use, by any person of any such credible evidence or information.

VI. PUBLIC NOTICE

A notice requesting public comment on the proposed permit was published in *The Advocate*, Baton Rouge, Louisiana, on May XX, 2009, in *The Gonzales Weekly*, Gonzales, Louisiana, on May XX, 2009 and in the Office of Environmental Services Public Notice Mailing List on May XX, 2009. The draft permit was also submitted to US EPA Region VI. All comments will be considered prior to the final permit decision.

VII. Effects on Ambient Air

Emissions associated with the proposed modification were reviewed by the Air Quality Assessment Division to ensure compliance with the NAAQS and AAS. LDEQ did not require the applicant to model emissions.

Dispersion Model(s) Used: <None>

Pollutant	Time Period	Calculated Maximum Ground Level Concentration	Louisiana Air Quality Standard (NAAQS)
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VIII. General Condition XVII Activities

Work Activity	Schedule	Emission Rates - TPY					
		PM ₁₀	SO ₂	NO _x	CO	VOC	H ₂ SO ₄
Unit 1 Startup/Shutdowns	4 events/yr			0.26	3.39		
Unit 2 Startup/Shutdowns	4 events/yr			0.22	2.91		
Unit 3 Startup/Shutdowns	4 events/yr			0.03	0.38		
Unit 6 Startup/Shutdowns	4 events/yr			0.48	3.86		
Hydrogen Product	7 days			0.28			
Compressor Startup/Shutdowns:	6 hrs/yr			0.02	0.11		
SYN Gas Compressor							
Compressor Startup/Shutdowns:	3 events/yr			0.07	0.03		
Vessel/Pipeline Blowdowns							
Tube Trailer Loading	208 hrs/yr			0.05	3.07		

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Work Activity	Schedule	Emission Rates - TPY				
		PM ₁₀	SO ₂	NO _x	CO	VOC
20 Temporary Tanks	Turnaround				3.836	
Tank Cleaning	5 events/yr				3.857	

IX. Insignificant Activities

ID No.:	Description	Citation
	MEA Storage Tank, 1700 gals	Insignificant Activity per LAC 33:III.501.B.5.A.3.
	Diesel Storage Tank, 200 gals	Insignificant Activity per LAC 33:III.501.B.5.A.3.
2-01	85% MEA Storage Tank, 5000 gals	Insignificant Activity per LAC 33:III.501.B.5.A.3.
	Demin Acid Tank, 10,000 gals	Insignificant Activity per LAC 33:III.501.B.5.A.4.
	Chromatographs	Insignificant Activity per LAC 33:III.501.B.5.A.6.
	Meter Testing	Insignificant Activity per LAC 33:III.501.B.5.A.6.
	Various-Sized Diesel Fuel Tanks, up to 1,000 gals	Insignificant Activity per LAC 33:III.501.B.5.A.8.
	Gas Sampling	Insignificant Activity per LAC 33:III.501.B.5.A.9.
	Purge Gas	Insignificant Activity per LAC 33:III.501.B.5.A.9.
	Catalyst Charging Operations	Insignificant Activity per LAC 33:III.501.B.5.A.11.
	Temporary Cooling Tower	Insignificant Activity per LAC 33:III.501.B.5.A.12.
T-13	Methanol Stabilizer Mix Tank, 230 gallons	Insignificant Activity per LAC 33:III.501.B.5.A.2.

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X. Applicable Louisiana and Federal Air Quality Requirements

ID No.:	Description	LAC 33:III Chapter																	
		5'	9'	11'	13'	15'	2103	2107	2111	2115	2122	2147	2149	29	22	51*	53	56	59*
UNF0001	Praxair, Geismar Facility		1											1	1	1	1	1	1
GRP0009	NON-VOC FLARES																		
EQT0006	1-89 - Unit 1 Cold Box West Flare					1										2			
EQT0007	1-91 - CO Flare					1										2			
EQT0010	10-95 - Unit 6 Main Flare					1										2			
EQT0014	2-71 - Unit 1 MEA Flare					1										2			
EQT0015	2-81 - Unit 2 Main Flare					1										2			
EQT0017	2-89 - Unit 1 Cold Box East Flare					1										2			
EQT0020	2-96 - Unit 6 Cold Box Flare					1										2			
EQT0023	3-71 - Unit 1 Main Flare					1										2			
GRP0007	COOLING TOWERS & COLD BOXES																		
EQT0021	3-01 - Cooling Tower - Unit 1																		
EQT0028	5-01 - Cooling Tower - Unit 3																		
EQT0030	6-01 - Cooling Tower - Unit 6																		
EQT0033	7-01 - Cooling Tower - Formaldehyde/Methanol Plants																		
EQT0045	3-08 - Cooling Tower - Unit 2																		
EQT0003	1-07 - Cold Box Emissions - Unit 1															1			
EQT0013	2-07 - Cold Box Emissions - Unit 2															1			
EQT0022	3-07 - Cold Box Emissions - Unit 6															1			
GRP0006	EMISSION CAP FOR REFORMERS 1, 2, 3, 6																		
EQT0004	1-71 - Reformer Flue Gas Stack, Unit 1															1			
EQT0005	1-81 - Reformer Flue Gas Stack, Unit 2															1			
EQT0016	2-88 - Reformer Flue Gas Stack, Unit 3															1			
EQT0036	9-95 - Reformer Flue Gas Stack, Unit 6															2			
EQT0039	R-133 - Methanol Converter															2			

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ID No.:	Description	LAC 33.III.Chapter																
		5	9	11	13	15	2103	2107	2111	2115	2122	2147	2149	29	22	51*	53	56
EQT0019	2-94 - Methanol Flare			1		2				3		2		2		2		1
EQT0029	5-96 - Methanol Shift Tank (D-110A)					1												
EQT0032	6-96 - Methanol Shift Tank (D-110B)					1												
EQT0040	D-103 - Crude Methanol Flash Drum																	2
EQT0041	D-105 - Crude Methanol "In-Process" Tank																	2
EQT0042	T-137 - Topping Column																	2
EQT0043	T-138 - Refining Column																	2
EQT0009	I-94 - Tank Farm Flare		1		2				3			2		2		2		1
EQT0008	I-93 - Formaldehyde Storage Tank (T-03B)					3												
EQT0018	2-93 - Formaldehyde Storage Tank (T-02B)					3												
EQT0024	3-96 - Formaldehyde Storage Tank (T-04B)					3												
EQT0031	6-93 - Formaldehyde Storage Tank (T-01B)					3												
EQT0011	11-93 - Tank Truck Loading Rack (Methanol Plant)					3												
EQT0026	4-93 - Tank Truck Loading Rack (Formaldehyde Plant)					3												
CON0003	1-08 - Catalytic Converter Vent					3			3									1
EQT0044	I-08a- Startup Heater					1		1	2								2	
EQT0002	I-03 - Unit 6 Deaerator																	1
EQT0027	4-96 - T9 Off-Spec. Methanol Storage Tank (T-09B)								1									1
EQT0034	7-93 - Methanol Storage Tank (T-07B)								1									1
EQT0001	I-01 - 85% MEA Storage Tank								3									
EQT0035	9-93 - Methanol Stop Tank (D-111)								3									1
EQT0037	T5-3 - Wastewater Tank No. 902A								3									1
EQT0038	T5-4 - Wastewater Tank No. 902B								3									1
EQT0047	I-09 - Tank Trucks Unloading Operations (Methanol Plant)																	1
FUG0001	5-93 - Fugitives (Formaldehyde Plant)								1									1

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X. Applicable Louisiana and Federal Air Quality Requirements

ID No.:	Description	LAC 33:III.Chapter																
		5	9	11	13	15	2103	2107	2111	2113	2122	2147	2149	29	22	51*	53	56
FUG0002	8-93 - Fugitives (Methanol Plant)								1		1							
RLP0006	2-03 - Unit 6 MEA CO2 Vent																	
RLP0008	4-07 - Miscellaneous Steam Vents																	

The regulations indicated above are State Only regulations.
'LAC 33:III.501.C.6 citations are federally enforceable except when it specifically states that the regulation is State Only.

KEY TO MATRIX

- 1 -The regulations have applicable requirements that apply to this particular emission source.
 -The emission source may have an exemption from control stated in the regulation. The emission source may not have to be controlled but may have monitoring, recordkeeping, or reporting requirements.
- 2 -The regulations have applicable requirements that apply to this particular emission source but the source is currently exempt from these requirements due to meeting a specific criterion, such as it has not been constructed, modified or reconstructed since the regulations have been in place. If the specific criteria changes the source will have to comply at a future date.
- 3 -The regulations apply to this general type of emission source (i.e. vents, furnaces, towers, and fugitives) but do not apply to this particular emission source.

Blank - The regulations clearly do not apply to this type of emission source.

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Louisiana Department of Environmental Quality

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X. Applicable Louisiana and Federal Air Quality Requirements

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X. Applicable Louisiana and Federal Air Quality Requirements

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DEPARTMENT OF ENVIRONMENT

Geismar Plant
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KEY TO MATRIX

- 1 -The regulations have applicable requirements that apply to this particular emission source.
 -The emission source may have an exemption from control stated in the regulation. The emission source may not have to be controlled but may have monitoring, recordkeeping, or reporting requirements.
 - 2 -The regulations have applicable requirements that apply to this particular emission source but the source is currently exempt from these requirements due to meeting a specific criterion, such as it has not been constructed, modified or reconstructed since the regulations have been in place. If the specific criteria changes the source will have to comply at a future date.
 - 3 -The regulations apply to this general type of emission source (i.e. vents, furnaces, towers, and fugitives) but do not apply to this particular emission source.

Blank = The regulations clearly do not apply to this type of emission source

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XI. Explanation for Exemption Status or Non-Applicability of a Source

ID No:	Requirement	Notes
Flares EQT06 1-89 EQT07 1-91 EQT10 10-95 EQT14 2-71 EQT15 2-81 EQT17 2-89 EQT20 2-96 EQT23 3-71 EQT19 2-94 EQT09 1-94 Heater EQT44 1-08a	Emission Standards for Sulfur Dioxide-Emission Limitations [LAC 33:II. 1503] Chapter 22. Control of Emissions of Nitrogen Oxides (NOx) [LAC 33:II. 2201.C.7]	EXEMPT. Source emits < 250 tons per year of sulfur compounds. EXEMPT per LAC 33:II.2201.C.7.
Reformers EQT04 1-71 EQT05 1-81 EQT16 2-88 EQT36 9-95	Emission Standards for Sulfur Dioxide-Emission Limitations [LAC 33:II. 1503]	EXEMPT. Source emits < 250 tons per year of sulfur compounds.
Reformer EQT36 9-95	Limiting VOC Emissions from SOCM1 Reactor Processes and Distillation Operations [LAC 33:II.2147]	EXEMPT. This equipment is subject to HON Subpart G [LAC 33:II.2147.A.2.g]
	40 CFR 60 Subpart RRR	EXEMPT. This equipment is subject to HON Subpart G [40 CFR 63.110(d)]

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XI. Explanation for Exemption Status or Non-Applicability of a Source

ID No:	Requirement	Notes
Flares EQT09 1-94 EQT19 2-94	Emission Standards for Sulfur Dioxide-Emission Limitations [LAC 33:III.1503] Control of Emission of Organic Compounds-Waste Gas Disposal [LAC 33:III.2115]	EXEMPT. Source emits < 250 tons per year of sulfur compounds. DOES NOT APPLY. This equipment is subject to HON Subpart G.
	Limiting VOC Emissions from SOCMI Reactor Processes and Distillation Operations [LAC 33:III.2147.A.2.g]	EXEMPT. This equipment is subject to the HON Subpart G.
	40 CFR 60 Subpart NNN [40 CFR 63.110(d)]	EXEMPT. This equipment is subject to HON Subpart G
Catalytic Converter CON03 1-08	Control of Emission of Organic Compounds-Waste Gas Disposal [LAC 33:III.2115]	DOES NOT APPLY. This equipment is subject to HON Subpart G
	Limiting VOC Emissions from SOCMI Reactor Processes and Distillation Operations [LAC 33:III.2147.A.2.g]	EXEMPT. This equipment is subject to the HON Subpart G.
	40 CFR 60 Subpart III [40 CFR 63.110(d)]	EXEMPT. This equipment is subject to the HON Subpart G.
Formaldehyde Tanks EQT08 1-93 EQT18 2-93 EQT24 3-96 EQT31 6-93	Control of Emission of Organic Compounds-Storage of VOC Compounds [LAC 33:III.2103]	DOES NOT APPLY. Vapor Pressure < 0.75 psia.
Wastewater, MEA, Methanol Tanks EQT01 1-01 EQT35 9-93 EQT37 T5-3 EQT38 T5-4	Control of Emission of Organic Compounds-Storage of VOC Compounds [LAC 33:III.2103]	DOES NOT APPLY. Vapor pressure < 1.5 psia.

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XI. Explanation for Exemption Status or Non-Applicability of a Source

ID No.	Requirement	Notes
MEA, Methanol Tanks	NSPS Subpart Kb – Standards of Performance for Volatile Organic Liquid Storage Vessels [40 CFR 60.110b(a)]	DOES NOT APPLY. Storage vessel capacity < 19,812 gals (75 m ³).
EQT01 1-01		
EQT27 4-96		
EQT29 5-96		
EQT32 6-96		
EQT36 9-93		
Formaldehyde Tanks	NSPS Subpart Kb – Standards of Performance for Volatile Organic Liquid Storage Vessels	EXEMPT. Storage vessels are subject to Kb and the HON. Tanks are required to comply only with the HON, Subpart G.
EQT08 1-93		
EQT18 2-93		
EQT24 3-96		
EQT31 6-93		
EQT34 7-93		
EQT40 D-103	40 CFR 60 Subpart NNN [40 CFR 63.110(b)(2)]	EXEMPT. This vent is subject to HON Subpart G
EQT41 D-105		
EQT42 T-137		
EQT43 T-138		
Loading Operations	Control of Emissions of Volatile Organic Compounds-Loading [LAC 33:III.2107.A]	DOES NOT APPLY. VOCs in materials loaded have a true vapor pressure < 1.5 psia at loading conditions.
EQT11 11-93		
EQT26 4-93		
Cooling Towers	NESHAP for Source Categories Subpart Q-Chromium Emissions from Industrial Process Cooling Towers (IPCT) [40 CFR Part 63.400(a)]	DOES NOT APPLY. No water treatment programs using chromium or chromium compounds at the IPCT.
EQT21 3-01		
EQT28 5-01		
EQT30 6-01		
EQT33 7-01		
EQT45 2-08		

The above table provides explanation for both the exemption status or non-applicability of a source cited by 1, 2 or 3 in the matrix presented in Section X of this permit.

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EQUIPMENT LIST			
EMISSION ID	DESCRIPTION	NOTES	
EQT014 2-71	Unit 1 MEA Flare	Synthesis gas from Reformer Unit 1 & 3	
EQT024 3-71	Unit 1 Main Flare	Synthesis gas from Reformer Unit 1 & 3	
EQT015 2-81	Unit 2 Main Flare	Synthesis gas from Unit No. 2	
EQT006 1-89	Unit 1 Cold Box West Flare	Various vent gas from Unit 1 Cold Box Flare	
EQT017 2-89	Unit 1 Cold Box East Flare	Various vent gas from Unit 1 Cold Box Flare	
EQT007 1-91	CO Flare	CO from storage area and CO tube trailers	
EQT010 10-95	Unit 6 Main Flare	Synthesis gas from Unit 6	
EQT002 2-96	Unit 6 Cold Box Flare	Various vent gases from Unit 6 Cold Box Area	
EQT018 2-93	HCHO Storage Tank (T-02B)	Controlled by Tank Farm Flare (Emission Point No. 1-94)	
EQT024 3-96	HCHO Storage Tank (T-04B)	Controlled by Tank Farm Flare (Emission Point No. 1-94)	
EQT026 4-93	Tank Truck Loading Rack (Formaldehyde Plant)	Controlled by Tank Farm Flare (Emission Point No. 1-94)	
EQT031 6-93	HCHO Storage Tank (T-01B)	Controlled by Tank Farm Flare (Emission Point No. 1-94)	
EQT008 1-93	HCHO Storage Tank (T-03B)	Controlled by Tank Farm Flare (Emission Point No. 1-94)	
EQT011 11-93	Tank Truck Loading Rack (Methanol Plant)	Controlled by Tank Farm Flare (Emission Point No. 1-94)	
EQT029 5-96	MeOH Storage Tank (D-110A)	Controlled by Methanol Flare (Emission Point No. 2-94)	
EQT032 6-96	MeOH Storage Tank (D-110B)	Controlled by Methanol Flare (Emission Point No. 2-94)	

AIR PERMIT BRIEFING SHEET
AIR PERMITS DIVISION
LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY

Geismar Plant
Agency Interest No. 2218
Praxair, Inc.
Geismar, Ascension Parish, Louisiana

EQUIPMENT LIST			
EMISSION ID	DESCRIPTION	NOTES	
EQT040 D-103	Crude Methanol Flash Drum	Controlled by Methanol Flare (Emission Point No. 2-94)	
EQT041 D-105	Crude Methanol "In-Process" Tank	Controlled by Methanol Flare (Emission Point No. 2-94)	
EQT039 R-133	Methanol Converter	Controlled by Reformer Flue Gas Stack, Unit 6 (Emission Point No. 9-95)	
EQT042 T-137	Topping Column	Controlled by Catalytic Converter (Emission Point No. 1-08)	
EQT043 T-138	Refining Column	Controlled by Catalytic Converter (Emission Point No. 1-08)	
V-03A	HCHO Absorber Vent	Controlled by Catalytic Converter (Emission Point No. 1-08)	

LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY
APPENDIX A: PART 70 SPECIFIC CONDITIONS

Geismar Plant
Agency Interest No. 2218
Praxair, Inc.
Geismar, Ascension Parish, Louisiana

Permittee shall comply with a streamlined equipment leaks monitoring program. Compliance with the streamlined program in accordance with this specific condition shall serve to comply with each of the fugitive emission monitoring programs being streamlined, as indicated in the following table. Noncompliance with the streamlined program in accordance with this specific condition may subject the permittee to enforcement action for one or more of the applicable fugitive emissions programs.

- a. Permittee shall apply the streamlined program to the combined universe of components subject to any of the programs being streamlined. Any component type which does not require periodic monitoring under the overall most stringent program shall be monitored as required by the most stringent requirements of any other program being streamlined and will not be exempted. The streamlined program will include any exemptions based on size of component available in any of the programs being streamlined.
- b. Permittee shall use leak definitions and monitoring frequency based on the overall most stringent program. Percent leaker performance shall be calculated using the provisions of the overall most stringent program. Annual monitoring shall be defined as once every four quarters.
- c. Permittee shall comply with recordkeeping and reporting requirements of the overall most stringent program. Semiannual reports shall be submitted on August 30 and February 28, to cover the periods January 1 through June 30, and July 1, through December 31, respectively. The semiannual reports shall include any monitoring performed within the reporting period.

Unit or Plant Site	Program Being Streamlined	Stream Applicability	Overall Most Stringent Program
8-93 FUG002 -Methanol Plant 5-93 FUG001 -Formaldehyde Plant	LAC 33:III.2122 40 CFR 60 Subpart VV 40 CFR 63 Subpart H	10% VOC 10% VOC 5% VOHAP	40 CFR 63 Subpart H

**LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY
STATE ONLY SPECIFIC CONDITIONS**

**Geismar Plant
Agency Interest No. 2218
Praxair, Inc.
Geismar, Ascension Parish, Louisiana**

The number of each type of component required to be monitored for each monitoring period under applicable leak detection and repair programs shall be reported to the Department by inclusion with each periodic monitoring report. Fugitive emission piping components may be added to or removed from the permitted units, without triggering the need to apply for a permit modification, provided:

- a. Changes in components involve routine maintenance or are undertaken to address safety concerns, or involve small piping revisions with no associated emissions increases except from the fugitive emissions components themselves;
- b. The changes do not involve any associated increase in production rate or capacity, or tie in of new or modified process equipment other than the piping components;
- c. Actual emissions following the changes will not exceed the emission limits contained in this permit; and
- d. The components are promptly incorporated into any applicable leak detection and repair program.

INVENTORIES

AJ ID: 2218 - Praxair Inc - Geismar HYCO Facility
 Activity Number: PER20080001
 Permit Number: 0180-00031-V3
 Air - Title V Regular Permit Major Mod

Subject Item Inventory:

ID	Description	Tank Volume	Max. Operating Rate	Normal Operating Rate	Contents	Operating Time
PRAXAIR GEISMAR PLANT						
CON 0003	1-08 - Catalytic Converter Vent			5000 gallons/yr		(None Specified)
EQT 0001	1-01 - 85% MEA Storage Tank	9400 gallons			8760 hr/yr	
EQT 0002	1-03 - Unit 6 Deaerator				8760 hr/yr	
EQT 0003	1-07 - Cold Box Emissions - Unit 1				8760 hr/yr	
EQT 0004	1-71 - Reformer Flue Gas Stack, Unit 1		110 MM BTU/hr		8760 hr/yr	
EQT 0005	1-81 - Reformer Flue Gas Stack, Unit 2		126 MM BTU/hr		8760 hr/yr	
EQT 0006	1-89 - Unit 1 Cold Box West Flare		.15 MM BTU/hr		8760 hr/yr	
EQT 0007	1-91 - CO Flare		.06 MM BTU/hr		8760 hr/yr	
EQT 0008	1-93 - Formaldehyde Storage Tank (T-03B)	125000 gallons		13.5 MM gallons/yr		
EQT 0009	1-94 - Tank Farm Flare		.06 MM BTU/hr		8760 hr/yr	
EQT 0010	10-95 - Unit 6 Main Flare		.15 MM BTU/hr		8760 hr/yr	
EQT 0011	11-93 - Tank Truck Loading Rack (Methanol Plant)			14.6 MM gallons/yr		
EQT 0012	2-01 - 85% MEA Storage Tank (D-385)	5000 gallons		6000 gallons/yr		
EQT 0013	2-07 - Cold Box Emissions - Unit 2				8760 hr/yr	
EQT 0014	2-71 - Unit 1 MEA Flare		.2 MM BTU/hr		8760 hr/yr	
EQT 0015	2-81 - Unit 2 Main Flare		.2 MM BTU/hr		8760 hr/yr	
EQT 0016	2-88 - Reformer Flue Gas Stack, Unit 3		42 MM BTU/hr		8760 hr/yr	
EQT 0017	2-89 - Unit 1 Cold Box East Flare		.14 MM BTU/hr		8760 hr/yr	
EQT 0018	2-93 - Formaldehyde Storage Tank (T-02B)	75000 gallons		13.5 MM gallons/yr		
EQT 0019	2-94 - Methanol Flare		.2 MM BTU/hr		8760 hr/yr	
EQT 0020	2-96 - Unit 6 Cold Box Flare		.31 MM BTU/hr		8760 hr/yr	
EQT 0021	3-01 - Cooling Tower - Unit 1			3416.4 MM gallons/yr		
EQT 0022	3-07 - Cold Box Emissions - Unit 6				8760 hr/yr	
EQT 0023	3-71 - Unit 1 Main Flare		.31 MM BTU/hr		8760 hr/yr	
EQT 0024	3-96 - Formaldehyde Storage Tank (T-04B)	25000 gallons		1.25 MM gallons/yr		
EQT 0026	4-93 - Tank Truck Loading Rack (Formaldehyde Plant)			125 MM bbl/yr		
EQT 0027	4-96 - T9 Off-Spec. Methanol Storage Tank (T-09B)	13540 gallons		40614 gallons/yr		
EQT 0028	5-01 - Cooling Tower - Unit 3			1524.2 MM gallons/yr		
EQT 0029	5-96 - Methanol Shift Tank (D-110A)	12000 gallons		7.3 MM gallons/yr		
EQT 0030	6-01 - Cooling Tower - Unit 6			2440.9 MM gallons/yr		
EQT 0031	6-93 - Formaldehyde Storage Tank (T-01B)	25000 gallons		1.4 MM gallons/yr		
EQT 0032	6-96 - Methanol Shift Tank (D-110B)	12000 gallons		7.3 MM gallons/yr		
EQT 0033	7-01 - Cooling Tower - Formaldehyde/Methanol Plant			2890.8 MM gallons/yr		
EQT 0034	7-93 - Methanol Storage Tank (T-07B)	300000 gallons		14.6 MM gallons/yr		
EQT 0035	9-93 - Methanol Slop Tank (D-111)	25000 gallons		65700 gallons/yr		
EQT 0036	9-95 - Reformer Flue Gas Stack, Unit 6		565 MM BTU/hr		8760 hr/yr	
EQT 0037	T-5-3 - Wastewater Tank No. 902A		15000 gallons		8760 hr/yr	
EQT 0038	T-5-4 - Wastewater Tank No. 902B		15000 gallons		8760 hr/yr	
EQT 0039	R-133 - Methanol Converter				8760 hr/yr	

INVENTORIES

AI ID: 2218 - Praxair Inc - Geismar HYCO Facility
 Activity Number: PER20080001
 Permit Number: 0180-00031-V3
 Air - Title V Regular Permit Major Mod

Subject Item Inventory:

ID	Description	Tank Volume	Max. Operating Rate	Normal Operating Rate	Contents	Operating Time
PRAAIR GEISMAR PLANT						
EQT 0040	D-103 - Crude Methanol Flash Drum					8760 hr/yr
EQT 0041	D-105 - Crude Methanol "In-Process" Tank					8760 hr/yr
EQT 0042	T-137 - Topping Column					8760 hr/yr
EQT 0043	T-138 - Refining Column					8760 hr/yr
EQT 0044	1-08a - Startup Heater					8760 hr/yr
EQT 0045	2-08 - Cooling Tower - Unit 2					8760 hr/yr
EQT 0047	1-09 - Tank Truck Unloading Operations(Methanol Plant)					8760 hr/yr
FUG 0001	5-93 - Fugitives (Formaldehyde Plant)					8760 hr/yr
FUG 0002	8-93 - Fugitives (Methanol Plant)					8760 hr/yr
RLP 0006	2-03 - Unit 6 MEA CO2 Vent					8760 hr/yr
RLP 0008	4-07 - Miscellaneous Steam Vents					(None Specified)
Stack Information:						
ID	Description	Velocity (ft/sec)	Flow Rate (cubic ft/min-actual)	Diameter (feet)	Discharge Area (square feet)	Height (feet)
PRAAIR GEISMAR PLANT						
CON 0003	1-08 - Catalytic Converter Vent					21
EQT 0002	1-03 - Unit 6 Desorber	.17				50
EQT 0004	1-71 - Reformer Flue Gas Stack, Unit 1	40	28970	3.92		75
EQT 0005	1-81 - Reformer Flue Gas Stack, Unit 2	37	28000		4	85
EQT 0006	1-89 - Unit 1 Cold Box West Flare	47.4	248	.33		120
EQT 0007	1-91 - CO Flare	1.75	57.5	.B3		58
EQT 0008	1-93 - Formaldehyde Storage Tank (T-03B)					90
EOT 0009	1-94 - Tank Farm Flare	1.58	4.65	.25		35
EOT 0010	10-95 - Unit 6 Main Flare	.18	39.34	2.16		100
EOT 0011	11-93 - Tank Truck Loading Rack (Methanol Plant)					90
EOT 0014	2-71 - Unit 1 MEA Flare					85
EOT 0015	2-81 - Unit 2 Main Flare	129	6081	1		85
EOT 0016	2-88 - Reformer Flue Gas Stack, Unit 3					60
EOT 0017	2-89 - Unit 1 Cold Box East Flare	3.14	9.27	.25		40
EOT 0018	2-93 - Formaldehyde Storage Tank (T-02B)					275
EOT 0019	2-94 - Methanol Flare	1.58	4.65	1.17		140
EOT 0020	2-96 - Unit 6 Cold Box Flare	15	176.6	.5		260
EOT 0021	3-01 - Cooling Tower - Unit 1					18.2

INVENTORIES

AI ID: 2218 - Praxair Inc - Geismar HYCO Facility
Activity Number: PER20080001
Permit Number: 0180-00031-V3
Air - Title V Regular Permit Major Mod

Stack Information:

ID	Description	Velocity (ft/sec)	Flow Rate (cubic ft/min-actual)	Diameter (feet)	Discharge Area (square feet)	Height (feet)	Temperature (°F)
PRAXAIR GEISMAR PLANT							
EQT 0023	3-71 - Unit 1 Main Flare			1.33		92	
EQT 0024	3-96 - Formaldehyde Storage Tank (T-03B)				20	70	
EQT 0026	4-93 - Tank Truck Loading Rack (Formaldehyde Plant)					90	
EQT 0027	4-96 - T9 Off-Spec Methanol Storage Tank (T-09B)					16	
EQT 0028	5-01 - Cooling Tower - Unit 3					18.3	
EQT 0029	5-96 - Methanol Shift Tank (D-110A)					35.5	
EQT 0030	6-01 - Cooling Tower - Unit 6					18.7	
EQT 0031	6-93 - Formaldehyde Storage Tank (T-01B)					90	
EQT 0032	6-96 - Methanol Shift Tank (D-110B)					35.5	
EQT 0033	7-01 - Cooling Tower - Formaldehyde/Methanol Plant					27.7	
EQT 0034	7-93 - Methanol Storage Tank (T-07B)					70	
EQT 0035	9-93 - Methanol Slop Tank (D-111)					70	
EQT 0036	9-95 - Reformer Flue Gas Stack, Unit 6	18.99	89425	10	110	700	
EQT 0045	2-08 - Cooling Tower - Unit 2					27.7	
FUG 0001	5-93 - Fugitives (Formaldehyde Plant)					90	
FUG 0002	8-93 - Fugitives (Methanol Plant)					70	
RLP 0006	2-03 - Unit 6 MEA CO2 Vent			1583	5	40	125

Relationships:

ID	Description	Relationship	ID	Description
EQT 0008	1-93 - Formaldehyde Storage Tank (T-03B)	Controlled by	EQT 0009	1-94 - Tank Farm Flare
EQT 0011	11-93 - Tank Truck Loading Rack (Methanol Plant)	Controlled by	EQT 0009	1-94 - Tank Farm Flare
EQT 0018	2-93 - Formaldehyde Storage Tank (T-02B)	Controlled by	EQT 0009	1-94 - Tank Farm Flare
EQT 0024	3-96 - Formaldehyde Storage Tank (T-04B)	Controlled by	EQT 0009	1-94 - Tank Farm Flare
EQT 0026	4-93 - Tank Truck Loading Rack (Formaldehyde Plant)	Controlled by	EQT 0009	1-94 - Tank Farm Flare
EQT 0029	5-96 - Methanol Shift Tank (D-110A)	Controlled by	EQT 0019	2-94 - Methanol Flare
EQT 0031	6-93 - Formaldehyde Storage Tank (T-01B)	Controlled by	EQT 0009	1-94 - Tank Farm Flare
EQT 0032	6-96 - Methanol Shift Tank (D-110B)	Controlled by	EQT 0019	2-94 - Methanol Flare
EQT 0039	R-133 - Methanol Converter	Controlled by	EQT 0036	9-95 - Reformer Flue Gas Stack, Unit 6
EQT 0040	D-103 - Crude Methanol Flash Drum	Controlled by	EQT 0019	2-94 - Methanol Flare
EQT 0041	D-105 - Crude Methanol "In-Process" Tank	Controlled by	EQT 0019	2-94 - Methanol Flare
EQT 0042	T-137 - Topping Column	Controlled by	EQT 0019	2-94 - Methanol Flare
EQT 0043	T-138 - Refining Column	Controlled by	EQT 0019	2-94 - Methanol Flare

INVENTORIES

AI ID: 2218 - Praxair Inc - Geismar HYCO Facility
 Activity Number: PER20080001
 Permit Number: 0180-00031-V3
 Air - Title V Regular Permit Major Mod

Subject Item Groups:

ID	Group Type	Group Description
GRP 0006	Equipment Group	GRP0006 - Emission Cap for Reformers 1, 2, 3, and 6
GRP 0007	Equipment Group	GRP0007 - COOLING TOWERS, COLD BOXES
GRP 0009	Equipment Group	GRP0009 - NON-VOC FLARES
UNF 0001	Unit or Facility Wide	UNF0001 - PRAXAIR GEISMAR PLANT

Group Membership:

ID	Description	Member of Groups
EQT 0003	1-07 - Cold Box Emissions - Unit 1	GRP0000000007
EQT 0004	1-71 - Reformer Flue Gas Stack, Unit 1	GRP0000000006
EQT 0005	1-81 - Reformer Flue Gas Stack, Unit 2	GRP0000000006
EQT 0006	1-89 - Unit 1 Cold Box West Flare	GRP0000000009
EQT 0007	1-91 - CO Flare	GRP0000000009
EQT 0010	10-95 - Unit 6 Main Flare	GRP0000000009
EQT 0013	2-07 - Cold Box Emissions - Unit 2	GRP0000000007
EQT 0014	2-71 - Unit 1 MEA Flare	GRP0000000009
EQT 0015	2-81 - Unit 2 Main Flare	GRP0000000009
EQT 0016	2-88 - Reformer Flue Gas Stack, Unit 3	GRP0000000006
EQT 0017	2-89 - Unit 1 Cold Box East Flare	GRP0000000009
EQT 0020	2-96 - Unit 6 Cold Box Flare	GRP0000000009
EQT 0021	3-01 - Cooling Tower - Unit 1	GRP0000000007
EQT 0022	3-07 - Cold Box Emissions - Unit 6	GRP0000000007
EQT 0023	3-71 - Unit 1 Main Flare	GRP0000000009
EQT 0028	5-01 - Cooling Tower - Unit 3	GRP0000000007
EQT 0030	6-01 - Cooling Tower - Unit 6	GRP0000000007
EQT 0033	7-01 - Cooling Tower - Formaldehyde/Methanol Plant	GRP0000000007
EQT 0036	9-95 - Reformer Flue Gas Stack, Unit 6	GRP0000000006
EQT 0045	2-08 - Cooling Tower - Unit 2	GRP0000000007

NOTE: The UNF group relationship is not printed in this table. Every subject item is a member of the UNF group

Annual Maintenance Fee:

Fee Number	Air Contaminant Source	Multiplier	Units Of Measure
0440	0440 Industrial Gases		
0630	0630 Organic Oxides, Alcohols, Glycols (Rated Capacity)	208.8	MM lbs/yr

SIC Codes:

2813	Industrial gases	UNF 001
2869	Industrial organic chemicals, nec	UNF 001

EMISSION RATES FOR CRITERIA POLLUTANTS

AID: 2218 - Praxair Inc - Geismar HYCO Facility
 Activity Number: PER20080001
 Permit Number: 0180-00031-V3
 Air - Title V Regular Permit Major Mod

Subject Item	CO			NOx			PM10			SO2			VOC		
	Avg lb/hr	Max lb/hr	Tons/Year												
PRAXAIR GEISMAR PLANT															
CON 0003 1-08	5.47	6.56	23.95	0.29	0.35	1.29	0.02	0.03	0.10	0.002	0.002	0.008	2.03	2.44	8.91
EQT 0001 1-01													<0.001	<0.001	<0.001
EQT 0002 1-03													0.46	0.46	2.00
EQT 0003 1-07	0.29	0.29	1.26												
EQT 0004 1-71	4.48		22.79			0.92			0.07						
EQT 0005 1-81	5.13		28.52			1.05			0.08						
EQT 0006 1-89	6.98	13.95	30.56	0.11	0.23	0.49	0.001	0.002	0.01	<0.001	<0.001	0.01	0.02	0.02	0.05
EQT 0007 1-91	0.68	1.37	2.98	0.04	0.09	0.19	<0.001	0.001	0.002	<0.001	<0.001	0.01	0.01	0.01	0.02
EQT 0009 1-94	0.02	0.05	0.10	0.004	0.01	0.02	<0.001	0.001	0.002	<0.001	<0.001	0.04	0.09	0.09	0.19
EQT 0010 10-95	1.55	3.09	6.77	0.06	0.13	0.28	0.002	0.004	0.01	<0.001	<0.001	0.02	0.03	0.03	0.08
EQT 0013 2-07	0.06	0.06	0.27												
EQT 0014 2-71	0.08	0.15	0.33	0.01	0.03	0.06	0.002	0.003	0.01	<0.001	<0.001	0.001	0.02	0.03	0.07
EQT 0015 2-81	4.67	9.34	20.45	0.15	0.30	0.67	0.002	0.003	0.01	<0.001	<0.001	0.001	0.02	0.03	0.07
EQT 0016 2-88		1.71				14.69			0.35			0.03			0.37
EQT 0017 2-89	0.31	0.62	1.35	0.01	0.02	0.04	0.001	0.001	0.002	<0.001	<0.001	0.01	0.01	0.01	0.03
EQT 0019 2-94	0.08	0.16	0.35	0.01	0.03	0.07	0.002	0.003	0.01	<0.001	<0.001	0.001	0.02	0.03	0.07
EQT 0020 2-96	2.24	4.48	9.82	0.05	0.10	0.23	0.002	0.005	0.01	<0.001	<0.001	0.001	0.02	0.05	0.10
EQT 0021 3-01									2.32	2.32	10.16				
EQT 0022 3-07	0.02	0.02	0.07												
EQT 0023 3-71	0.64	1.29	2.82	0.12	0.24	0.53	0.002	0.005	0.01	<0.001	<0.001	0.001	0.02	0.05	0.10
EQT 0027 4-96													0.026		0.113
EQT 0028 5-01															
EQT 0030 6-01															

EMISSION RATES FOR CRITERIA POLLUTANTS

AI ID: 2218 - Praxair Inc - Geismar HYCO Facility

Activity Number: PER20080001

Permit Number: 0180-00031-V3

Air - Title V Regular Permit Major Mod

Subject Item	CO			NOx			PM10			SO2			VOC		
	Avg lb/hr	Max lb/hr	Tons/Year												
PRAXAIR GEISMAR PLANT															
EQT 0033 7-01							1.96	1.96	8.60						
EQT 0034 7-93													0.042		0.184
EQT 0035 9-93													0.0024		0.011
EQT 0036 9-95	700		180				4.72			0.37			4.97		
EQT 0037 T-3													0.019	0.019	0.083
EQT 0038 T-4													0.019	0.019	0.083
EQT 0045 2-08							1.30	1.30	5.71						
EQT 0047 1-09													0.20	0.40	0.88
FUG 0001 5-93	0.002		0.008										0.29		1.28
FUG 0002 6-93													2.22		9.74
GRP 0006 GRP0006	31.19		136.62	70.88		310.45	6.41		28.06	0.51			2.22	6.74	29.54
RLP 0006 2-03	2.466	2.466	10.80												

Note: Emission rates in bold are from alternate scenarios and are not included in permitted totals unless otherwise noted in a footnote.

EMISSION RATES FOR TAP/HAP & OTHER POLLUTANTS

AI ID: 2218 - Praxair Inc - Geismar HYCO Facility

Activity Number: PER20080001

Permit Number: 0180-00031-V3

Air - Title V Regular Permit Major Mod

Emission Pt.	Pollutant	Avg lb/hr	Max lb/hr	Tons/Year
CON 0003 1-08	Formaldehyde	0.12	0.14	0.53
	Methanol	0.10	0.12	0.44
EQT 0002 1-03	Methanol	0.46	0.46	2.00
EQT 0009 1-94	Formaldehyde	0.01	0.02	0.042
	Methanol	0.03	0.06	0.13
EQT 0019 2-04	Methanol	1.50	3.00	6.56
EQT 0027 4-06	Methanol	0.026		0.113
EQT 0034 7-03	Methanol	0.042		0.184
EQT 0035 9-03	Methanol	0.0024		0.011
EQT 0036 9-05	Ammonia	1.73	5	7.56
EQT 0037 T5-3	Formaldehyde	0.019	0.019	0.081
	Methanol	<0.001	<0.001	0.002
EQT 0038 T5-4	Formaldehyde	0.019	0.019	0.081
	Methanol	<0.001	<0.001	0.002
EQT 0047 1-09	Methanol	0.20	0.40	0.88
FUG 0001 5-03	Formaldehyde	0.285		1.246
	Methanol	0.006		0.026
FUG 0002 8-03	Methanol	2.211		9.684
RLP 0008 4-07	Ammonia	0.43	0.43	1.86
UNF 0001 UNF0001	Ammonia			9.42
	Formaldehyde			1.98
	Methanol			20.03

Note: Emission rates in bold are from alternate scenarios and are not included in permitted totals unless otherwise noted in a footnote. Emission rates attributed to the UNF reflect the sum of the TAP/HAP limits of the individual emission points (or caps) under this permit, but do not constitute an emission cap.

SPECIFIC REQUIREMENTS

AI ID: 2218 - Praxair Inc - Geismar HYCO Facility
Activity Number: PER20080001
Permit Number: 0180-00031-V3
Air - Title V Regular Permit Major Mod

CON 0003 1-08 - Catalytic Converter Vent

1 [40 CFR 63.113(a)(2)] Organic HAP \geq 98 % reduction by weight, or \leq 20 ppmv, whichever is less stringent, as determined using the methods in 40 CFR 63.116(c). For combustion devices, calculate emission reduction or concentration on a dry basis, corrected to 3-percent oxygen. Subpart G. [40 CFR 63.113(a)(2)]

2 [40 CFR 63.114(a)(1)] Which Months: All Year Statistical Basis: None specified Temperature monitored by temperature monitoring device continuously. Equip the temperature monitoring device with a continuous recorder and install in the gas stream immediately before and after the catalyst bed. Subpart G. [40 CFR 63.114(a)(1)]

3 [40 CFR 63.116(c)] Which Months: All Year Statistical Basis: None specified Conduct a performance test using the procedures in 40 CFR 63.116(c)(1) through (c)(4). Subpart G. [40 CFR 63.116(c)]

4 [40 CFR 63.117(a)] Equipment/operational data recordkeeping by electronic or hard copy at the regulation's specified frequency. Keep up-to-date, readily accessible records of the data specified in 40 CFR 63.117(a)(4) through (a)(8), as applicable. Subpart G. [40 CFR 63.117(a)]

5 [40 CFR 63.118(a)] Equipment/operational data recordkeeping by electronic or hard copy at the regulation's specified frequency. Keep up-to-date, readily accessible records of the data specified in 40 CFR 63.118(a)(1) through (a)(4). Subpart G. [40 CFR 63.118(a)] Control emissions of toxic air pollutants to a degree that constitutes Maximum Achievable Control Technology (MACT) as approved by DEQ. Class III TAPs. MACT determination is not required.

EQT 0002 1-03 - Unit 6 Deaerator

6 [LAC 33:III.5109.A] Control emissions of toxic air pollutants to a degree that constitutes Maximum Achievable Control Technology (MACT) as approved by DEQ. Class III TAPs. MACT determination is not required.

EQT 0004 1-71 - Reformer Flue Gas Stack, Unit 1

7 [LAC 33:III.5109.A] Opacity \leq 20 percent, except during the cleaning of a fire box or building of a new fire, soot blowing or lanceing, charging of an incinerator, equipment changes, ash removal or rapping of precipitators, which may have an opacity in excess of 20 percent for not more than one six-minute period in any 60 consecutive minutes (Complies by using sweet natural gas as fuel).

8 [LAC 33:III.1101.B] Which Months: All Year Statistical Basis: None specified Total suspended particulate \leq 0.6 lb/MMBTU of heat input (Complies by using sweet natural gas as fuel).

9 [LAC 33:III.1313.C] Which Months: All Year Statistical Basis: None specified Establish an emission factor for each applicable affected point source such that if each affected point sources was operated at its averaging capacity, the cumulative emission factor in pounds NOx/MMBTU from all point sources in the averaging group would not exceed the facility-wide emission factor. Use the equations in LAC 33:III.2201.E.a to calculate the cumulative emission rate and the facility-wide emission factor. Demonstrate compliance with the facility-wide averaging plan using either the method in LAC 33:III.2201.E.1.c.i or the method in LAC 33:III.2201.E.1.c.ii.

10 [LAC 33:III.2201.E.1.a] Equipment/operational data recordkeeping by electronic or hard copy at the approved frequency. Carry out recordkeeping that includes, but is not limited to, a record of the data on which the determination of each point source's hourly, daily, or 30-day, as appropriate, compliance with the facility-wide averaging plan is based.

11 [LAC 33:III.2201.E.1.c] Comply with the facility-wide averaging plan as approved by DEQ. Plan submitted 3/2/2005 and approved 4/17/2005.

12 [LAC 33:III.2201.E.1.i]

13 [LAC 33:III.2201.E.1]

SPECIFIC REQUIREMENTS

AI ID: 2018 - Praxair Inc - Geismar HYCO Facility
Activity Number: PER20080001
Permit Number: 0180-00031-V3
Air - Title V Regular Permit Major Mod

EQT 0004 1-71 - Reformer Flue Gas Stack, Unit 1

- 14 [LAC 33:III.2201.H.2.a.i] Fuel monitored by totalizer continuously. Monitor fuel usage with a totalizing fuel meter.
Which Months: May-Sep Statistical Basis: None specified
- 15 [LAC 33:III.2201.H.2.a.ii] Oxygen monitored by the regulation's specified method(s) continuously. Monitor oxygen concentration with an oxygen monitor.
Which Months: May-Sep Statistical Basis: None specified
- 16 [LAC 33:III.2201.H.9] Fuel recordkeeping by electronic or hard copy daily. Record fuel gas composition.
- 17 [LAC 33:III.2201.H.9] Fuel monitored by the regulation's specified method(s) daily. Analyze the fuel gas composition according to the methods listed in LAC 33:III.2201.G.5.g.
Which Months: May-Sep Statistical Basis: None specified
- 18 [LAC 33:III.2201.I.1] Submit Notification: Due at least 30 days prior to any compliance testing conducted under LAC 33:III.2201.G and any CEMS or PEMS performance evaluation conducted under LAC 33:III.2201.H in order to give DEQ an opportunity to conduct a pretest meeting and observe the emission testing.
- 19 [LAC 33:III.2201.I.1] Submit test results: Due within 60 days after completing the emission testing required in LAC 33:III.2201.I.1.
- 20 [LAC 33:III.2201.I.2] Submit report: Due within 90 days of the end of each quarter for any noncompliance of the applicable emission limitations of LAC 33:III.2201.D or E. Include the information specified in LAC 33:III.2201.I.2.a through I.2.d.

EQT 0005 1-81 - Reformer Flue Gas Stack, Unit 2

- 21 [LAC 33:III.101.B] Opacity <= 20 percent, except during the cleaning of a fire box or building of a new fire, soot blowing or lancing, charging of an incinerator, equipment changes, ash removal or rapping of precipitators, which may have an opacity in excess of 20 percent for not more than one six-minute period in any 60 consecutive minutes (Complies by using sweet natural gas as fuel).
Which Months: All Year Statistical Basis: None specified
- 22 [LAC 33:III.1313.C] Total suspended particulate <= 0.6 lb/MMBTU of heat input (Complies by using sweet natural gas as fuel).
Which Months: All Year Statistical Basis: None specified
- 23 [LAC 33:III.2201.E.1.a] Establish an emission factor for each applicable affected point source such that if each affected point sources was operated at its averaging capacity, the cumulative emission factor in pounds NOx/MMBTu from all point sources in the averaging group would not exceed the facility-wide emission factor. Use the equations in LAC 33:III.2201.E.1.a to calculate the cumulative emission rate and the facility-wide emission factor. Demonstrate compliance with the facility-wide averaging plan using either the method in LAC 33:III.2201.E.1.c.i or the method in LAC 33:III.2201.E.1.c.ii.
- 24 [LAC 33:III.2201.E.1.c] Equipment/operational data recordkeeping by electronic or hard copy at the approved frequency. Carry out recordkeeping that includes, but is not limited to, a record of the data on which the determination of each point source's hourly, daily, or 30-day, as appropriate, compliance with the facility-wide averaging plan is based.
- 25 [LAC 33:III.2201.E.1.i] Comply with the facility-wide averaging plan as approved by DEQ. Plan submitted 3/2/2005 and approved 4/17/2005.
- 26 [LAC 33:III.2201.E.1] Fuel monitored by totalizer continuously. Monitor fuel usage with a totalizing fuel meter.
- 27 [LAC 33:III.2201.H.2.a.i] Which Months: May-Sep Statistical Basis: None specified
- 28 [LAC 33:III.2201.H.2.a.ii] Oxygen monitored by the regulation's specified method(s) continuously. Monitor oxygen concentration with an oxygen monitor.
Which Months: May-Sep Statistical Basis: None specified

SPECIFIC REQUIREMENTS

AI ID: 2218 - Praxair Inc - Geismar HYCO Facility
Activity Number: PER20080001
Permit Number: 0180-00031-V3
Air - Title V Regular Permit Major Mod

EQT 0005 1-81 - Reformer Flue Gas Stack, Unit 2

29 [LAC 33:III.2201.H.9]

Fuel monitored by the regulation's specified method(s) daily. Analyze the fuel gas composition according to the methods listed in LAC 33:III.2201.G.5.g.

Which Months: May-Sep Statistical Basis: None specified

Fuel recordkeeping by electronic or hard copy daily. Record fuel gas composition.

Submit Notification: Due at least 30 days prior to any compliance testing conducted under LAC 33:III.2201.G and any CEMS or PEMS performance evaluation conducted under LAC 33:III.2201.H in order to conduct a pretest meeting and observe the emission testing.

Submit test results: Due within 60 days after completing the emission testing required in LAC 33:III.2201.I.1.

Submit report: Due within 90 days of the end of each quarter for any noncompliance of the applicable emission limitations of LAC 33:III.2201.D or E. Include the information specified in LAC 33:III.2201.I.2.a through I.2.d.

EQT 0006 1-89 - Unit 1 Cold Box West Flare

34 [LAC 33:III.1105]

Opacity <= 20 percent, except for a combined total of six hours in any 10 consecutive day period, for burning in connection with pressure valve releases for control over process upsets.

Which Months: All Year Statistical Basis: None specified

EQT 0007 1-91 - CO Flare

35 [LAC 33:III.1105]

Opacity <= 20 percent, except for a combined total of six hours in any 10 consecutive day period, for burning in connection with pressure valve releases for control over process upsets.

Which Months: All Year Statistical Basis: None specified

EQT 0008 1-93 - Formaldehyde Storage Tank (T-03B)

Equipment/operational data recordkeeping by electronic or hard copy at the approved frequency. Keep readily accessible records showing the dimensions of the storage vessel and an analysis showing the capacity of the storage vessel. Keep the records as long as the storage vessel retains Group 2 status and is in operation. Subpart G. [40 CFR 63.123(a)]

EQT 0009 1-94 - Tank Farm Flare

37 [40 CFR 63.126(b)(2)]

38 [40 CFR 63.127(a)(2)]

Comply with the requirements of 40 CFR 63.11(b). Subpart G. [40 CFR 63.126(b)(2)]
 Presence of a flame monitored by the regulation's specified method(s) continuously. Subpart G. [40 CFR 63.127(a)(2)]

Which Months: All Year Statistical Basis: None specified

Conduct a visible emission test using the techniques specified in 40 CFR 63.11(b)(4). Subpart G. [40 CFR 63.128(b)(1)]
 Determine the net heating value of the gas being combusted using the techniques specified in 40 CFR 63.11(b)(6). Subpart G. [40 CFR 63.128(b)(2)]

SPECIFIC REQUIREMENTS

AI ID: 2218 - Praxair Inc - Geismar HYCO Facility
Activity Number: PER20080001
Permit Number: 0180-00031-V3
Air - Title V Regular Permit Major Mod

EQT 0009 1-94 - Tank Farm Flare

- 41 [40 CFR 63.128(b)(3)] Determine the exit velocity using the techniques specified in either 40 CFR 63.11(b)(7)(i) or 63.11(b)(8), as appropriate. Subpart G. [40 CFR 63.128(b)(3)]
- 42 [40 CFR 63.129] Equipment/operational data recordkeeping by electronic or hard copy at the regulation's specified frequency. Keep records of the information specified in 40 CFR 63.129(a) through (f). Subpart G.
- 43 [LAC 33:III.1105] Opacity <= 20 percent, except for a combined total of six hours in any 10 consecutive day period, for burning in connection with pressure valve releases for control over process upsets.
- Which Months: All Year Statistical Basis: None specified
- Control emissions of toxic air pollutants to a degree that constitutes Maximum Achievable Control Technology (MACT) as approved by DEQ.
- Class III TAPs. MACT determination is not required.

EQT 0010 10-95 - Unit 6 Main Flare

- 45 [LAC 33:III.1105] Opacity <= 20 percent, except for a combined total of six hours in any 10 consecutive day period, for burning in connection with pressure valve releases for control over process upsets.
- Which Months: All Year Statistical Basis: None specified

EQT 0011 11-93 - Tank Truck Loading Rack (Methanol Plant)

- 46 [40 CFR 63.126(a)(1)] Vapor collection system: Design and operate to collect the organic hazardous air pollutant vapors displaced from tank trucks or railcars during loading, and route them to a process, or to a fuel gas system, or to a control device as provided in 40 CFR 63.126(b). Subpart G. [40 CFR 63.126(a)(1)]
- 47 [40 CFR 63.126(a)(2)] Vapor collection system: Design and operate such that organic HAP vapors collected at one loading arm will not pass through another loading arm in the rack to the atmosphere. Subpart G. [40 CFR 63.126(a)(2)]
- 48 [40 CFR 63.126(a)(3)] Ensure that the process, fuel gas system, or control device used to comply with 40 CFR 63 Subpart G will be operating whenever organic HAP emissions are vented to the process, fuel gas system, or control device. Subpart G. [40 CFR 63.126(a)(3)]
- 49 [40 CFR 63.126(a)] Equip with a vapor collection system and control device. Subpart G. [40 CFR 63.126(a)]
- 50 [40 CFR 63.126(b)(2)] Reduce emissions of organic HAPs using a flare. Do not vent halogenated vent streams to the flare. Subpart G. [40 CFR 63.126(b)(2)]
- 51 [40 CFR 63.126(b)(2)] Comply with the requirements of 40 CFR 63.11(b). Subpart G. [40 CFR 63.126(b)(2)]
- 52 [40 CFR 63.127(a)(2)] Presence of a flame monitored by the regulation's specified method(s) continuously. Subpart G. [40 CFR 63.127(a)(2)]
- 53 [40 CFR 63.129] Which Months: All Year Statistical Basis: None specified
- Equipment/operational data recordkeeping by electronic or hard copy at the regulation's specified frequency. Keep records of the information specified in 40 CFR 63.129(a) through (f). Subpart G.

EQT 0014 2-71 - Unit 1 MEA Flare

SPECIFIC REQUIREMENTS

AI ID: 2218 - Praxair Inc - Geismar HYCO Facility
 Activity Number: PER20080001
 Permit Number: 0180-00031-V3
 Air - Title V Regular Permit Major Mod

EQT 0014 2-71 - Unit 1 MEA Flare

54 [LAC 33:III.1.105]

Opacity <= 20 percent, except for a combined total of six hours in any 10 consecutive day period, for burning in connection with pressure valve releases for control over process upsets.

Which Months: All Year Statistical Basis: None specified

EQT 0015 2-81 - Unit 2 Main Flare

55 [LAC 33:III.1.105]

Opacity <= 20 percent, except for a combined total of six hours in any 10 consecutive day period, for burning in connection with pressure valve releases for control over process upsets.

Which Months: All Year Statistical Basis: None specified

EQT 0016 2-88 - Reformer Flue Gas Stack, Unit 3

Opacity <= 20 percent, except during the cleaning of a fire box or building of a new fire, soot blowing or lancing, charging of an incinerator, equipment changes, ash removal or rapping of precipitators, which may have an opacity in excess of 20 percent for not more than one six-minute period in any 60 consecutive minutes (Complies by using sweet natural gas as fuel!).

Which Months: All Year Statistical Basis: None specified

Total suspended particulate <= 0.6 lb/MMBTU of heat input (Complies by using sweet natural gas as fuel!).

Which Months: All Year Statistical Basis: None specified

Establish an emission factor for each applicable affected point source such that if each affected point sources was operated at its averaging capacity, the cumulative emission factor in pounds NOx/MMBTu from all point sources in the averaging group would not exceed the facility-wide emission factor. Use the equations in LAC 33:III.2201.E.a to calculate the cumulative emission rate and the facility-wide emission factor.

Demonstrate compliance with the facility-wide averaging plan using either the method in LAC 33:III.2201.E.1.c.i or the method in LAC 33:III.2201.E.1.c.ii.

Equipment/operational data recordkeeping by electronic or hard copy at the approved frequency. Carry out recordkeeping that includes, but is not limited to, a record of the data on which the determination of each point source's hourly, daily, or 30-day, as appropriate, compliance with the facility-wide averaging plan is based.

Comply with the facility-wide averaging plan as approved by DEQ. Plan submitted 3/2/2005 and approved 4/17/2005.

Fuel monitored by totalizer continuously. Monitor fuel usage with a totalizing fuel meter.

Which Months: May-Sep Statistical Basis: None specified

Oxygen monitored by the regulation's specified method(s) continuously. Monitor oxygen concentration with an oxygen monitor.

Which Months: May-Sep Statistical Basis: None specified

Submit test results: Due within 60 days after completing the emission testing required in LAC 33:III.2201.I.I.

Submit Notification: Due at least 30 days prior to any compliance testing conducted under LAC 33:III.2201.G and any CEMS or PEMS performance evaluation conducted under LAC 33:III.2201.H in order to give DEQ an opportunity to conduct a pretest meeting and observe the emission testing.

Submit report: Due within 90 days of the end of each quarter for any noncompliance of the applicable emission limitations of LAC 33:III.2201.D or E. Include the information specified in LAC 33:III.2201.I.2.a through I.2.d.

SPECIFIC REQUIREMENTS

AI ID: 2218 - Praxair Inc - Geismar HYCO Facility
Activity Number: PER20080001
Permit Number: 0180-00031-V3
Air - Title V Regular Permit Major Mod

EQT 0017 2-89 - Unit 1 Cold Box East Flare

67 [LAC 33.III.1105]
 Opacity <= 20 percent, except for a combined total of six hours in any 10 consecutive day period, for burning in connection with pressure valve releases for control over process upsets.
 Which Months: All Year Statistical Basis: None specified

EQT 0018 2-93 - Formaldehyde Storage Tank (T-02B)

68 [40 CFR 63.123(a)]
 Equipment/operational data recordkeeping by electronic or hard copy at the approved frequency. Keep readily accessible records showing the dimensions of the storage vessel and an analysis showing the capacity of the storage vessel. Keep the records as long as the storage vessel retains Group 2 status and is in operation. Subpart G. [40 CFR 63.123(a)]

EQT 0019 2-94 - Methanol Flare

69 [40 CFR 63.113(a)(1)(i)]
 Comply with the provisions of 40 CFR 63.11(b). Subpart G. [40 CFR 63.113(a)(1)(i)]
 Presence of a flame monitored by the regulation's specified method(s) continuously. Subpart G. [40 CFR 63.114(a)(2)]
 Which Months: All Year Statistical Basis: None specified
 70 [40 CFR 63.114(a)(2)]
 Conduct a visible emission test using the techniques specified in 40 CFR 63.11(b)(4). Subpart G. [40 CFR 63.116(a)(1)]
 Determine the net heating value of the gas being combusted using the techniques specified in 40 CFR 63.11(b)(6). Subpart G. [40 CFR 63.116(a)(2)]
 Determine the exit velocity using the techniques specified in either 40 CFR 63.11(b)(7)(i) or 63.11(b)(8), as appropriate. Subpart G. [40 CFR 63.116(a)(3)]
 Equipment/operational data recordkeeping by electronic or hard copy at the regulation's specified frequency. Keep up-to-date, readily accessible records of the data specified in 40 CFR 63.117(a)(4) through (a)(8), as applicable. Subpart G. [40 CFR 63.117(a)]
 Equipment/operational data recordkeeping by electronic or hard copy at the regulation's specified frequency. Keep up-to-date, readily accessible records of the data specified in 40 CFR 63.118(a)(1) through (a)(4). Subpart G. [40 CFR 63.118(a)]
 Opacity <= 20 percent, except for a combined total of six hours in any 10 consecutive day period, for burning in connection with pressure valve releases for control over process upsets.
 Which Months: All Year Statistical Basis: None specified
 Opacity <= 20 percent, except for a combined total of six hours in any 10 consecutive day period, for burning in connection with pressure valve releases for control over process upsets.
 Which Months: All Year Statistical Basis: None specified
 Control emissions of toxic air pollutants to a degree that constitutes Maximum Achievable Control Technology (MACT) as approved by DEQ. Class III TAPs. MACT determination is not required.

EQT 0020 2-96 - Unit 6 Cold Box Flare

79 [LAC 33.III.1105]
 Opacity <= 20 percent, except for a combined total of six hours in any 10 consecutive day period, for burning in connection with pressure valve releases for control over process upsets.
 Which Months: All Year Statistical Basis: None specified

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SPECIFIC REQUIREMENTS

AI ID: 2218 - Praxair Inc - Geismar HYCO Facility
Activity Number: PER20080001
Permit Number: 0180-00031-V3
Air - Title V Regular Permit Major Mod

EQT 0023 3-71 - Unit 1 Main Flare

80 [LAC 33:III.1105] Opacity <= 20 percent, except for a combined total of six hours in any 10 consecutive day period, for burning in connection with pressure valve releases for control over process upsets.
 Which Months: All Year Statistical Basis: None specified

EQT 0024 3-96 - Formaldehyde Storage Tank (T-04B)

81 [40 CFR 63.123(a)] Equipment/operational data recordkeeping by electronic or hard copy at the approved frequency. Keep readily accessible records showing the dimensions of the storage vessel and an analysis showing the capacity of the storage vessel. Keep the records as long as the storage vessel retains Group 2 status and is in operation. Subpart G. [40 CFR 63.123(a)]

EQT 0026 4-93 - Tank Truck Loading Rack (Formaldehyde Plant)

82 [40 CFR 63.130(f)] Equipment/operational data recordkeeping by electronic or hard copy annually. Keep records of the information specified in 40 CFR 63.130(f)(1) through (f)(3). Subpart G. [40 CFR 63.130(f)]

EQT 0027 4-96 - T9 Off-Spec. Methanol Storage Tank (T-09B)

83 [40 CFR 63.123(a)] Equipment/operational data recordkeeping by electronic or hard copy at the approved frequency. Keep readily accessible records showing the dimensions of the storage vessel and an analysis showing the capacity of the storage vessel. Keep the records as long as the storage vessel retains Group 2 status and is in operation. Subpart G. [40 CFR 63.123(a)]
 Equip with a submerged fill pipe.
 Determine VOC maximum true vapor pressure using the methods in LAC 33:III.2103.H.3-a.c.
 Equipment/operational data recordkeeping by electronic or hard copy at the regulation's specified frequency. Keep records of the information specified in LAC 33:III.2103.I.1 - 7, as applicable.
 Control emissions of toxic air pollutants to a degree that constitutes Maximum Achievable Control Technology (MACT) as approved by DEQ.
 Class III TAPs. MACT determination is not required.

EQT 0029 5-96 - Methanol Shift Tank (D-110A)

88 [40 CFR 63.123(a)] Equipment/operational data recordkeeping by electronic or hard copy at the approved frequency. Keep readily accessible records showing the dimensions of the storage vessel and an analysis showing the capacity of the storage vessel. Keep the records as long as the storage vessel retains Group 2 status and is in operation. Subpart G. [40 CFR 63.123(a)]
 Equip with a vapor loss control system, consisting of a gathering system capable of collecting volatile organic compound vapors and a vapor disposal system capable of processing such organic vapors. All tank gauging and sampling devices shall be gas-tight except when gauging or sampling is taking place.
 Equipment/operational data recordkeeping by electronic or hard copy at the regulation's specified frequency. Keep records of the information specified in LAC 33:III.2103.I.1 - 7, as applicable.

SPECIFIC REQUIREMENTS

AI ID: 2218 - Praxair Inc - Geismar HYCO Facility
 Activity Number: PER20080001
 Permit Number: 0180-00031-V3
 Air - Title V Regular Permit Major Mod

EQT 0031 6-93 - Formaldehyde Storage Tank (T-01B)

Equipment/operational data recordkeeping by electronic or hard copy at the approved frequency. Keep readily accessible records showing the dimensions of the storage vessel and an analysis showing the capacity of the storage vessel. Keep the records as long as the storage vessel retains Group 2 status and is in operation. Subpart G. [40 CFR 63.123(a)]

EQT 0032 6-96 - Methanol Shift Tank (D-110B)

Equipment/operational data recordkeeping by electronic or hard copy at the approved frequency. Keep readily accessible records showing the dimensions of the storage vessel and an analysis showing the capacity of the storage vessel. Keep the records as long as the storage vessel retains Group 2 status and is in operation. Subpart G. [40 CFR 63.123(a)]
 Equipment with a vapor loss control system, consisting of a gathering system capable of collecting volatile organic compound vapors and a vapor disposal system capable of processing such organic vapors. All tank gauging and sampling devices shall be gas-tight except when gauging or sampling is taking place.
 Equipment/operational data recordkeeping by electronic or hard copy at the regulation's specified frequency. Keep records of the information specified in LAC 33:III.2103.I.1 - 7, as applicable.

EQT 0034 7-93 - Methanol Storage Tank (T-07B)

Reduce hazardous air pollutants emissions to the atmosphere either by operating and maintaining a fixed roof and internal floating roof, an external floating roof, an external floating roof converted to an internal floating roof, a closed-vent system and control device, routing the emissions to a process or a fuel gas system, or vapor balancing in accordance with the requirements in 40 CFR 63.119(b), (c), (d), (e), (f), or (g) or equivalent as provided in 40 CFR 63.121. Subpart G. [40 CFR 63.119(a)(1)]

Internal floating roof: Ensure that the internal floating roof is floating on the surface at all times except when the floating roof must be supported by the leg supports during the periods specified in 40 CFR 63.119(b)(1) through (b)(1)(iii). When the floating roof is resting on the leg supports, ensure that the process of filling, emptying or refilling is continuous and accomplished as soon as practical. Subpart G. [40 CFR 63.119(b)]

Tank roof and seals monitored by visual inspection/determination at the regulation's specified frequency. Inspect the internal floating roof, the primary seal, and the secondary seal (if one is in service) according to the schedule specified in 40 CFR 63.120(a)(2) and (a)(3). Subpart G. [40 CFR 63.120(a)(1)]

Which Months: All Year Statistical Basis: None specified

Repair storage vessel or empty and remove from service within 45 calendar days, if during the inspections required by 40 CFR 63.120(a)(2)(i) or (a)(3)(ii), any of the conditions specified in 40 CFR 63.120(a)(4) are found. Subpart G. [40 CFR 63.120(a)(4)]
 If any of the conditions listed in 40 CFR 63.120(a)(7) are found during the inspections required by 40 CFR 63.120(a)(2)(ii), (a)(3)(i), or (a)(3)(ii), repair the storage vessel as necessary so that none of the conditions specified exist before filling or refilling the storage vessel with organic HAP. Subpart G. [40 CFR 63.120(a)(7)]

SPECIFIC REQUIREMENTS

AI ID: 2218 - Praxair Inc - Geismar HYCO Facility
Activity Number: PER20080001
Permit Number: 0180-00031-V3
Air - Title V Regular Permit Major Mod

EQT 0034 7-93 - Methanol Storage Tank (T-07B)

- 100 [40 CFR 63.120(a)]
 Submit Notification: Due in writing at least 30 calendar days prior to the refilling of each storage vessel to afford DEQ the opportunity to have an observer present, for all the inspections required by 40 CFR 63.120(a)(2)(ii), (a)(3)(i), and (a)(3)(ii). If the inspection required by 40 CFR 63.120(a)(2)(ii), (a)(3)(i), or (a)(3)(ii) is not planned and it could not have been known about 30 calendar days in advance of refilling, submit notification at least 7 calendar days prior to the refilling. Notification can be made by telephone and immediately followed by written documentation demonstrating why the inspection was unplanned. Subpart G. [40 CFR 63.120(a)]
- 101 [40 CFR 63.123]
 Equipment/operational data recordkeeping by electronic or hard copy at the regulation's specified frequency. Keep readily accessible records of the information specified in 40 CFR 63.123(a) through (i), as applicable. Keep the records as long as the storage vessel retains Group 1 status and is in operation. Subpart G.

Equip with a submerged fill pipe.

Equip internal floating roof with two seals mounted one above the other so that each forms a continuous closure that completely covers the space between the wall of the storage vessel and the edge of the internal floating roof. The lower seal may be vapor-mounted, but both must be continuous.

Provide each opening in the internal floating roof (except rim space vents and automatic bleeder vents) with a projection below the liquid surface. In addition, provide each opening (except for leg sleeves, bleeder vents, rim space vents, column wells, ladder wells, sample wells, and stub drains) with a cover equipped with a gasket. Equip automatic bleeder vents and rim space vents with gaskets and equip ladder wells with a sliding cover.

Equipment/operational data recordkeeping by electronic or hard copy at the regulation's specified frequency. Keep records of the information specified in LAC 33:III.2103.1.1 - 7, as applicable.

Control emissions of toxic air pollutants to a degree that constitutes Maximum Achievable Control Technology (MACT) as approved by DEQ. Class III TAPs. MACT determination is not required.

EQT 0035 9-93 - Methanol Stop Tank (D-111)

- 102 [LAC 33:III.2103.B]
 Equipment/operational data recordkeeping by electronic or hard copy at the approved frequency. Keep readily accessible records showing the dimensions of the storage vessel and an analysis showing the capacity of the storage vessel. Keep the records as long as the storage vessel retains Group 2 status and is in operation. Subpart G. [40 CFR 63.123(a)]
- 103 [LAC 33:III.2103.C.1.c]
 Control emissions of toxic air pollutants to a degree that constitutes Maximum Achievable Control Technology (MACT) as approved by DEQ. Class III TAPs. MACT determination is not required.

EQT 0036 9-95 - Reformer Flue Gas Stack, Unit 6

- 104 [40 CFR 63.113(a)(2)]
 Organic HAP >= 98 % reduction by weight, or <= 20 ppmv, whichever is less stringent, as determined using the methods in 40 CFR 63.116(c). For combustion devices, calculate emission reduction or concentration on a dry basis, corrected to 3-percent oxygen. Subpart G. [40 CFR 63.113(a)(2)]
- 105 [40 CFR 63.117(a)]
 Which Months: All Year Statistical Basis: None specified
- 106 [LAC 33:III.5109.A]
 Equipment/operational data recordkeeping by electronic or hard copy at the regulation's specified frequency. Keep up-to-date, readily accessible records of the data specified in 40 CFR 63.117(a)(4) through (a)(8), as applicable. Subpart G. [40 CFR 63.117(a)]

SPECIFIC REQUIREMENTS

AI ID: 2218 - Praxair Inc - Geismar HYCO Facility
Activity Number: PER20080001
Permit Number: 0180-00031-V3
Air - Title V Regular Permit Major Mod

EQT 0036 9-95 - Reformer Flue Gas Stack, Unit 6

Opacity <= 20 percent, except during the cleaning of a fire box or building of a new fire, soot blowing or lancing, charging of an incinerator, equipment changes, ash removal or rapping of precipitators, which may have an opacity in excess of 20 percent for not more than one six-minute period in any 60 consecutive minutes (Complies by using sweet natural gas as fuel).

Which Months: All Year Statistical Basis: None specified

Total suspended particulate <= 0.6 lb/MMBTU of heat input (Complies by using sweet natural gas as fuel).
 Which Months: All Year Statistical Basis: None specified
 Establish an emission factor for each applicable affected point source such that if each affected point sources was operated at its averaging capacity, the cumulative emission factor in pounds NOx/MMBTU from all point sources in the averaging group would not exceed the facility-wide emission factor. Use the equations in LAC 33:III.2201.E. a to calculate the cumulative emission rate and the facility-wide emission factor.

Demonstrate compliance with the facility-wide averaging plan using either the method in LAC 33:III.2201.E.1.c.i or the method in LAC 33:III.2201.E.1.c.ii.
 Equipment/operational data recordkeeping by electronic or hard copy at the approved frequency. Carry out recordkeeping that includes, but is not limited to, a record of the data on which the determination of each point source's hourly, daily, or 30-day, as appropriate, compliance with the facility-wide averaging plan is based.

Comply with the facility-wide averaging plan as approved by DEQ. Plan submitted 3/2/2005 and approved 4/17/2005.

Fuel monitored by totalizer continuously. Monitor fuel usage with a totalizing fuel meter.

Which Months: May-Sep Statistical Basis: None specified
 Diluent either Oxygen or Carbon dioxide monitored by the regulation's specified method(s) continuously. Monitor oxygen or carbon dioxide with a diluent monitor.

Which Months: May-Sep Statistical Basis: None specified
 Nitrogen oxides monitored by continuous emission monitor (CEM) continuously.

Which Months: May-Sep Statistical Basis: None specified
 Carbon monoxide monitored by the regulation's specified method(s) continuously. Monitor carbon monoxide with a CO monitor.

Which Months: May-Sep Statistical Basis: None specified
 Nitrogen oxides monitored by continuous emission monitor (CEM) continuously.
 Which Months: May-Sep Statistical Basis: None specified
 Carbon monoxide monitored by the regulation's specified method(s) continuously. Monitor carbon monoxide using a CO monitor.

Which Months: May-Sep Statistical Basis: None specified
 Which Months: May-Sep Statistical Basis: None specified
 Submit test results: Due within 60 days after completing the emission testing required in LAC 33:III.2201.I.1.
 Submit Notification: Due at least 30 days prior to any compliance testing conducted under LAC 33:III.2201.G and any CEMS or PEMS performance evaluation conducted under LAC 33:III.2201.H in order to give DEQ an opportunity to conduct a pretest meeting and observe the emission testing.

Submit report: Due within 90 days of the end of each quarter for any noncompliance of the applicable emission limitations of LAC 33:III.2201.D or E. Include the information specified in LAC 33:III.2201.I.2.a through I.2.d.

Submit report: Due annually, by the 1st of July. Submit ammonia emissions resulting from the operation of a NOx control equipment system in accordance with LAC 33:III.9.9.

SPECIFIC REQUIREMENTS

AI ID: 2218 - Praxair Inc - Geismar HYCO Facility
Activity Number: PER20080001
Permit Number: 0180-00031-V3
Air - Title V Regular Permit Major Mod

EQT 0036 9-95 - Reformer Flue Gas Stack, Unit 6

Equipment/operational data recordkeeping by electronic or hard copy at the regulation's specified frequency. Maintain records of the information specified in LAC 33:III.2201.I.1 through I.4 as applicable.

When CEMs are inoperable:

1. A portable analyzer is used to determine the stack NOx (ppm) and stack (%) O2 downstream of SCR
2. The following data is measured and is recorded in the facility's distributed control system (DCS) and is exported into an Excel spreadsheet
 - Fuel flow
 - Ammonia flow
 - Stack O2
 - 3. Using the specific heating values for each type of fuel used, the total firing rated (MM BTU/hr) is calculated
 - 4. All of the information gathered is entered in the Excel spreadsheet and the emission rates are calculated on an hourly basis

Ammonia emissions from the Selective Catalytic Reduction (SCR) Unit shall be calculated using the ammonia feed meter to the SCR and the two NOx CEMs (one upstream of SCR and one downstream of SCR). NOx converted in the SCR is determined from the two CEM readings and ammonia slip can then be determined because of the stoichiometric relationship that one lb-mole of NOx converted consumes one lb-mole of ammonia.

EQT 0037 T5-3 - Wastewater Tank No. 902A

This storage vessel stores a Group 2 wastewater stream.

Control emissions of toxic air pollutants to a degree that constitutes Maximum Achievable Control Technology (MACT) as approved by DEQ.
 Class III TAPs. MACT determination is not required.

EQT 0038 T5-4 - Wastewater Tank No. 902B

This storage vessel stores a Group 2 wastewater stream.

Control emissions of toxic air pollutants to a degree that constitutes Maximum Achievable Control Technology (MACT) as approved by DEQ.
 Class III TAPs. MACT determination is not required.

EQT 0039 R-133 - Methanol Converter

Reduce the vent emissions by 98 weight-percent meeting the requirements specified in 40 CFR 63.113(a)(2). Vent from R-133 is routed to the fuel gas system. HON Subpart G. [40 CFR 63.113(a)(2)]

EQT 0040 D-103 - Crude Methanol Flash Drum

Combust the vent emissions in a flare meeting the requirements specified in 40 CFR 63.113(a)(1)(i). D-103 vents to the Methanol Flare (emission point 2-94 / EQT 19). HON Subpart G. [40 CFR 63.113(a)(1)]

SPECIFIC REQUIREMENTS

AI ID: 2218 - Praxair Inc - Geismar HYCO Facility
 Activity Number: PER20080001
 Permit Number: 0180-00031-V3
 Air - Title V Regular Permit Major Mod

EQT 0041 D-105 - Crude Methanol "In-Process" Tank

136 [40 CFR 63.113(a)(1)]

Combust the vent emissions in a flare meeting the requirements specified in 40 CFR 63.113(a)(1)(i). D-105 vents to the Methanol Flare (emission point 2-94 / EQT 19). HON Subpart G. [40 CFR 63.113(a)(1)]

EQT 0042 T-137 - Topping Column

137 [40 CFR 63.113(a)(1)]

Combust the vent emissions in a flare meeting the requirements specified in 40 CFR 63.113(a)(1)(i). T-137 vents to the Methanol Flare (emission point 2-94 / EQT 19). HON Subpart G. [40 CFR 63.113(a)(1)]

EQT 0043 T-138 - Refining Column

138 [40 CFR 63.113(a)(1)]

Combust the vent emissions in a flare meeting the requirements specified in 40 CFR 63.113(a)(1)(i). T-138 vents to the Methanol Flare (emission point 2-94 / EQT 19). HON Subpart G. [40 CFR 63.113(a)(1)]

EQT 0044 1-08a - Startup Heater

139 [LAC 33:III.1101.B]

Opacity <= 20 percent, except during the cleaning of a fire box or building of a new fire, soot blowing or lancing, charging of an incinerator, equipment changes, ash removal or rapping of precipitators, which may have an opacity in excess of 20 percent for not more than one six-minute period in any 60 consecutive minutes (Complies by using sweet natural gas as fuel).
 Which Months: All Year Statistical Basis: None specified
 Total suspended particulate <= 0.6 lb/MMBTU of heat input (Complies by using sweet natural gas as fuel).
 Which Months: All Year Statistical Basis: None specified

EQT 0047 1-09 - Tank Truck Unloading Operations(Methanol Plant)

141 [40 CFR 63.2382]

Initial notification per 40 CFR 63 Subpart EEEE.
 Control emissions of toxic air pollutants to a degree that constitutes Maximum Achievable Control Technology (MACT) as approved by DEQ.
 Class III TAPs. MACT determination is not required.

FUG 0001 5-93 - Fugitives (Formaldehyde Plant)

143 [40 CFR 60 Subpart VV]

Comply with 40 CFR 63 Subpart H in accordance with streamlined LDAR fugitives monitoring program defined in Appendix A.
 Identify each piece of equipment in a process unit such that it can be distinguished readily from equipment that is not subject to 40 CFR 63 Subpart H. Subpart H. [40 CFR 63.162(c)]

SPECIFIC REQUIREMENTS

AI ID: 2218 - Praxair Inc - Geismar HYCO Facility
 Activity Number: PER20080001
 Permit Number: 0180-00031-V3
 Air - Title V Regular Permit Major Mod

FUG 0001 5-93 - Fugitives (Formaldehyde Plant)

Clearly identify leaking equipment, for leaking equipment detected as specified in 40 CFR 63.163, 40 CFR 63.164, 40 CFR 63.168, 40 CFR 63.169, and 40 CFR 63.172 through 63.174. The identification may be removed after the equipment is repaired, except for valves or for connectors subject to 40 CFR 63.174(c)(1)(i). The identification on a valve may be removed after it has been monitored as specified in 40 CFR 63.168(f)(3) and 63.175(e)(1)(D), and no leak has been detected during the follow-up monitoring. If electing to comply using the provisions of 40 CFR 63.174(c)(1), the identification on a connector may be removed after it is monitored as specified in 40 CFR 63.174(c)(1)(i) and no leak is detected during that monitoring. Subpart H. [40 CFR 63.162(f)]

Pumps in light liquid service: Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 monthly to detect leaks, except as provided in 40 CFR 63.162(b) and 63.163(e) through (i). If a reading of 10,000 ppm (phase I); 5,000 ppm (phase II); or 5,000 ppm (phase III, pumps handling polymerizing monomers), 2,000 ppm (phase III, pumps in food/medical service), or 1,000 ppm (phase III, all other pumps) or greater is recorded, a leak is detected. If a leak is detected, initiate repair provisions specified in 40 CFR 63.163(c). Subpart H. [40 CFR 63.163(b)(1)]

Which Months: All Year Statistical Basis: None specified

Pumps in light liquid service: Presence of a leak monitored by visual inspection/determination weekly (calendar). Monitor for indications of liquids dripping from the pump seal. If there are indications of liquids dripping from the pump seal, a leak is detected. If a leak is detected, initiate the repair provisions specified in 40 CFR 63.163(c). Subpart H. [40 CFR 63.163(b)(3)]

Which Months: All Year Statistical Basis: None specified

Pumps in light liquid service: Make a first attempt at repair no later than 5 calendar days after a leak is detected, and complete repairs no later than 15 calendar days after the leak is detected, except as provided in 40 CFR 63.163(o)(3) and 40 CFR 63.171. Subpart H. [40 CFR 63.163(c)] Pumps in light liquid service: Implement a quality improvement program for pumps that complies with the requirements of 40 CFR 63.176, if, in Phase III, calculated on a 6-month rolling average, the greater of either 10 percent of the pumps in a process unit or three pumps in a process unit leak. Subpart H. [40 CFR 63.163(d)(2)]

Pumps in light liquid service: Determine percent leaking pumps using the equation in 40 CFR 63.163(d)(4). Subpart H. [40 CFR 63.163(d)(4)]

Pumps in light liquid service (dual mechanical seal system): Operate with the barrier fluid at a pressure that is at all times greater than the pump stuffing box pressure; or equip with a barrier fluid degassing reservoir that is routed to a process or fuel gas system or connected by a closed-vent system to a control device that complies with the requirements of 40 CFR 63.172; or equip with a closed-loop system that purges the barrier fluid into a process stream. Comply with this requirement instead of the requirements in 40 CFR 63.163(a) through (d). Subpart H. [40 CFR 63.163(e)(1)]

Pumps in light liquid service (dual mechanical seal system): Ensure that the barrier fluid is not in light liquid service. Comply with this requirement instead of the requirements in 40 CFR 63.163(a) through (d). Subpart H. [40 CFR 63.163(e)(2)]

Pumps in light liquid service (dual mechanical seal system): Equip barrier fluid system with a sensor that will detect failure of the seal system, barrier fluid system, or both. Comply with this requirement instead of the requirements in 40 CFR 63.163(a) through (d). Subpart H. [40 CFR 63.163(e)(3)]

Pumps in light liquid service (dual mechanical seal system): Presence of a leak monitored by visual inspection/determination weekly (calendar). Monitor for indications of liquids dripping from the pump seal. If there are indications of liquids dripping from the pump seal at the time of the weekly inspection, monitor the pump as specified in 40 CFR 63.180(b) to determine if there is a leak of organic HAP in the barrier fluid. If an instrument reading of 1,000 ppm or greater is measured, a leak is detected. If a leak is detected, initiate the repair provisions in 40 CFR 63.163(e)(6). Comply with this requirement instead of the requirements in 40 CFR 63.163(a) through (d). Subpart H. [40 CFR 63.163(e)(4)]

Which Months: All Year Statistical Basis: None specified

SPECIFIC REQUIREMENTS

AI ID: 2218 - Praxair Inc - Geismar HYCO Facility
 Activity Number: PER20080001
 Permit Number: 0180-00031-V3
 Air - Title V Regular Permit Major Mod

FUG 0001 5-93 - Fugitives (Formaldehyde Plant)

- 155 [40 CFR 63.163(e)(6)(i)] Pumps in light liquid service (dual mechanical seal system): Determine, based on design considerations and operating experience, criteria that indicates failure of the seal system, the barrier fluid system, or both. Comply with this requirement instead of the requirements in 40 CFR 63.163(a) through (d). Subpart H. [40 CFR 63.163(e)(6)(i)]
- 156 [40 CFR 63.163(e)(6)] Pumps in light liquid service (dual mechanical seal system): Make a first attempt at repair no later than 5 calendar days after each leak is detected, and complete repairs no later than 15 calendar days after the leak is detected, except as provided in 40 CFR 63.171. Comply with this requirement instead of the requirements in 40 CFR 63.163(a) through (d). Subpart H. [40 CFR 63.163(e)(6)]
- 157 [40 CFR 63.163(e)] Pumps in light liquid service (dual mechanical seal system - sensor): Equipment/operational data monitored by visual inspection/determination daily, or equip with an audible alarm unless the pump is located within the boundary of an unmanned plant site. If the sensor indicates failure of the seal system, the barrier fluid system, or both based on the criteria established in 40 CFR 63.163(e)(6), a leak is detected. If a leak is detected, initiate repair provisions specified in 40 CFR 63.163(e)(6). Comply with this requirement instead of the requirements in 40 CFR 63.163(a) through (d). Subpart H. [40 CFR 63.163(e)]
- Which Months: All Year Statistical Basis: None specified
- 158 [40 CFR 63.163(j)(1)] Pumps in light liquid service (unsafe-to-monitor): Determine that the pump is unsafe-to-monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with 40 CFR 63.163(b) through (d). Comply with this requirement instead of the requirements in 40 CFR 63.163(b) through (e). Subpart H. [40 CFR 63.163(j)(1)]
- 159 [40 CFR 63.163(j)(2)] Pumps in light liquid service (unsafe-to-monitor): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 at the regulation's specified frequency. Maintain a written plan that requires monitoring of the pump as frequently as practicable during safe-to-monitor times but not more frequently than the periodic monitoring schedule otherwise applicable. Comply with this requirement instead of the requirements in 40 CFR 63.163(b) through (e). Subpart H. [40 CFR 63.163(j)(2)]
- Which Months: All Year Statistical Basis: None specified
- 160 [40 CFR 63.164(a)] Compressors: Equip with a seal system that includes a barrier fluid system and that prevents leakage of process fluid to the atmosphere, except as provided in 40 CFR 63.162(b) and 40 CFR 63.164(h) and (i). Subpart H. [40 CFR 63.164(a)]
- 161 [40 CFR 63.164(b)] Compressors: Operate the seal system with the barrier fluid at a pressure that is greater than the compressor stuffing box pressure; or equip with a barrier fluid system degassing reservoir that is routed to a process or fuel gas system or connected by a closed-vent system to a control device that complies with the requirements of 40 CFR 63.172; or equip with a closed-loop system that purges the barrier fluid directly into a process stream. Subpart H. [40 CFR 63.164(b)]
- 162 [40 CFR 63.164(c)] Compressors: Ensure that the barrier fluid is not in light liquid service. Subpart H. [40 CFR 63.164(c)]
- 163 [40 CFR 63.164(d)] Compressors: Equip each barrier fluid system as described in 40 CFR 63.164(a) through (c) with a sensor that will detect failure of the seal system, barrier fluid system, or both. Subpart H. [40 CFR 63.164(d)]
- 164 [40 CFR 63.164(e)(2)] Compressors (sensor): Determine, based on design considerations and operating experience, a criterion that indicates failure of the seal system, the barrier fluid system, or both. Subpart H. [40 CFR 63.164(e)(2)]
- 165 [40 CFR 63.164(g)] Compressors: Make a first attempt at repair no later than 5 calendar days after each leak is detected, and complete repairs no later than 15 calendar days after each leak is detected, except as provided in 40 CFR 63.171. Subpart H. [40 CFR 63.164(g)]
- 166 [40 CFR 63.164(i)(2)] Compressors (no detectable emissions): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 once initially and annually, and at other times requested by DEQ. Comply with this requirement instead of the requirements in 40 CFR 63.164(a) through (h). Subpart H. [40 CFR 63.164(i)(2)]
- Which Months: All Year Statistical Basis: None specified

SPECIFIC REQUIREMENTS

AJ ID: 2218 - Praxair Inc - Geismar HYCO Facility
 Activity Number: PER20080001
 Permit Number: 0180-00031-V3
 Air - Title V Regular Permit Major Mod

FUG 0001 5-93 - Fugitives (Formaldehyde Plant)

Compressors (sensor): Equipment/operational data monitored by visual inspection/determination daily, or equip with an alarm, unless the compressor is located within the boundary of an unmanned plant site. If the sensor indicates failure of the seal system, the barrier fluid system, or both based on the criterion determined under 40 CFR 63.164(e)(2), a leak is detected. If a leak is detected, initiate repair provisions specified in 40 CFR 63.164(g). Subpart H.

Which Months: All Year Statistical Basis: None specified

Pressure relief device in gas/vapor service: Organic HAP < 500 ppm above background except during pressure releases, as determined by the method specified in 63.180(c). Subpart H. [40 CFR 63.165(a)]

Which Months: All Year Statistical Basis: None specified

Pressure relief devices in gas/vapor service: After each pressure release, return to a condition indicated by an instrument reading of less than 500 ppm above background, as soon as practicable, but no later than 5 calendar days after each pressure release, except as provided in 40 CFR 63.171. Subpart H. [40 CFR 63.165(b)(1)]

Pressure relief devices in gas/vapor service: Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 within 5 days (calendar) after the pressure release and being returned to organic HAP service, to confirm the condition indicated by an instrument reading of less than 500 ppm above background, as measured by the method specified in 40 CFR 63.180(c). Subpart H. [40 CFR 63.165(b)(2)]

Which Months: All Year Statistical Basis: None specified

Pressure relief devices in gas/vapor service (rupture disk): After each pressure release, install a new rupture disk upstream of the pressure relief device as soon as practicable, but no later than 5 calendar days after each pressure release, except as provided in 40 CFR 63.171. Comply with this requirement instead of the requirements in 40 CFR 63.165(a) and (b). Subpart H. [40 CFR 63.165(d)(2)]

Sampling connection systems: Equip with a closed-purge, closed-loop, or closed-vent system, except as provided in 40 CFR 63.162(b). Operate the system as specified in 40 CFR 63.166(b). Subpart H.

Open-ended valves or lines: Equip with a cap, blind flange, plug, or a second valve, except as provided in 40 CFR 63.162(b) and 40 CFR 63.167(d) and (e). Ensure that the cap, blind flange, plug or second valve seals the open end at all times except during operations requiring process fluid flow through the open-ended valve or line, or during maintenance or repair. Operate each open-ended valve or line equipped with a second valve in a manner such that the valve on the process fluid end is closed before the second valve is closed. Subpart H.

Valves in gas/vapor service or light liquid service (Phase I): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 quarterly, as specified in 40 CFR 63.180(b). If an instrument reading of 10,000 ppm or greater is recorded, a leak is detected. If a leak is detected, initiate repair provisions in 40 CFR 63.168(f). Subpart H. [40 CFR 63.168(c)]

Which Months: All Year Statistical Basis: None specified

Valves in gas/vapor service or light liquid service (Phase II, 2 percent or greater leaking valves): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 monthly, as specified in 40 CFR 63.180(b); or implement a quality improvement program for valves that complies with the requirements of 40 CFR 63.175 and monitor quarterly. If an instrument reading of 500 ppm or greater is recorded, a leak is detected. If a leak is detected, initiate repair provisions in 40 CFR 63.168(f). If electing to implement a quality improvement program, follow the procedures in 40 CFR 63.175. Subpart H. [40 CFR 63.168(d)(1)]

Which Months: All Year Statistical Basis: None specified

167 [40 CFR 63.164]

Compressors (sensor): Equipment/operational data monitored by visual inspection/determination daily, or equip with an alarm, unless the compressor is located within the boundary of an unmanned plant site. If the sensor indicates failure of the seal system, the barrier fluid system, or both based on the criterion determined under 40 CFR 63.164(e)(2), a leak is detected. If a leak is detected, initiate repair provisions specified in 40 CFR 63.164(g). Subpart H.

168 [40 CFR 63.165(a)]

169 [40 CFR 63.165(b)(1)]

170 [40 CFR 63.165(b)(2)]

171 [40 CFR 63.165(d)(2)]

172 [40 CFR 63.166]

173 [40 CFR 63.167]

174 [40 CFR 63.168(c)]

175 [40 CFR 63.168(d)(1)]

SPECIFIC REQUIREMENTS

AI ID: 2018 - Praxair Inc - Geismar HYCO Facility
 Activity Number: PER20080001
 Permit Number: 0180-00031-V3
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FUG 0001 5-93 - Fugitives (Formaldehyde Plant)

- Valves in gas/vapor service or light liquid service (Phase III, less than 2 percent leaking valves): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 quarterly, as specified in 40 CFR 63.180(b). If an instrument reading of 500 ppm or greater is recorded, a leak is detected. If a leak is detected, initiate repair provisions in 40 CFR 63.168(f). Permittee may elect to comply with the alternate standards in 40 CFR 63.168(d)(3) and (d)(4). Subpart H. [40 CFR 63.168(d)(2)]
- Which Months: All Year Statistical Basis: None specified
- Valves in gas/vapor service or light liquid service: Determine percent leaking valves using the equation in 40 CFR 63.168(e)(1). Subpart H. [40 CFR 63.168(e)(1)]
- Valves in gas/vapor service or light liquid service (after leak repair): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 once within three months (at least) after repair to determine whether the valve has resumed leaking. Subpart H. [40 CFR 63.168(f)(3)]
- Which Months: All Year Statistical Basis: None specified
- Valves in gas/vapor service or light liquid service: Make a first attempt at repair no later than 5 calendar days after a leak is detected, and complete repairs no later than 15 calendar days after the leak is detected, except as provided in 40 CFR 63.171. Subpart H. [40 CFR 63.168(f)]
- Valves in gas/vapor service or light liquid service (unsafe-to-monitor): Demonstrate that the valve is unsafe to monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with 40 CFR 63.168(b) through (d). Comply with this requirement instead of the requirements in 40 CFR 63.168(b) through (f). Subpart H. [40 CFR 63.168(h)(1)]
- Valves in gas/vapor service or light liquid service (unsafe-to-monitor): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 at the regulation's specified frequency. Maintain a written plan that requires monitoring of the valves as frequently as practicable during safe-to-monitor times, but not more frequently than the periodic monitoring schedule otherwise applicable. Comply with this requirement instead of the requirements in 40 CFR 63.168(b) through (f). Subpart H. [40 CFR 63.168(h)(2)]
- Which Months: All Year Statistical Basis: None specified
- Valves in gas/vapor service or light liquid service (difficult-to-monitor): Demonstrate that the valve cannot be monitored without elevating the monitoring personnel more than 2 meters above a support surface or it is not accessible at anytime in a safe manner. Comply with this requirement instead of the requirements in 40 CFR 63.168(b) through (d). Subpart H. [40 CFR 63.168(i)(1)]
- Valves in gas/vapor service or light liquid service (difficult-to-monitor): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 annually. Maintain a written plan that requires monitoring of the valves at least once per calendar year. Comply with this requirement instead of the requirements in 40 CFR 63.168(b) through (d). Subpart H. [40 CFR 63.168(i)(3)]
- Which Months: All Year Statistical Basis: None specified
- Pumps, valves, connectors, and agitators in heavy liquid service; instrumentation systems; and pressure relief devices in liquid service: Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 within 5 days (calendar) if evidence of a potential leak to the atmosphere is found by visible, audible, olfactory, or any other detection method. If a reading of 10,000 ppm for agitators, 5,000 ppm for pumps handling polymerizing monomers, 2,000 ppm for all other pumps (including pumps in food/medical service), or 500 ppm for valves, connectors, instrumentation systems, and pressure relief devices, or greater is recorded, a leak is detected. If a leak is detected, initiate repair provisions specified in 40 CFR 63.169(c). Subpart H. [40 CFR 63.169(a)]
- Which Months: All Year Statistical Basis: None specified
- Pumps, valves, connectors, and agitators in heavy liquid service; instrumentation systems; and pressure relief devices in liquid service: Make a first attempt at repair no later than 5 calendar days after each leak is detected, and complete repairs no later than 15 calendar days after it each leak is detected, except as provided in 40 CFR 63.171. Subpart H. [40 CFR 63.169(c)]

SPECIFIC REQUIREMENTS

AI ID: 2218 - Praxair Inc - Geismar HYCO Facility
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FUG_0001 5-93 - Fugitives (Formaldehyde Plant)

186 [40 CFR 63.170] Surge control vessels and bottoms receivers: Equip with a closed-vent system that routes the organic vapors vented from the surge control vessel or bottoms receiver back to the process or to a control device that complies with the requirements of 40 CFR 63.172, except as provided in 40 CFR 63.162(b), or comply with the requirements of 40 CFR 63.119(b) or (c), if surge control vessel or bottoms receiver is not routed back to the process and meets the conditions specified in 40 CFR 63 Subpart H Table 2 or Table 3. Subpart H.

187 [40 CFR 63.172(d)(1)(i)] Closed-vent system (hard-piping): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 once initially according to the procedures in 40 CFR 63.180(b). If an instrument reading greater than 500 ppm above background is recorded, a leak is detected. If a leak is detected, initiate repair provisions in 40 CFR 63.172(h). Subpart H. [40 CFR 63.172(f)(1)(i)]

Which Months: All Year Statistical Basis: None specified
188 [40 CFR 63.172(d)(1)(ii)] Closed-vent system (hard-piping): Presence of a leak monitored by visual, audible, and/or olfactory annually. If a leak is detected, initiate repair provisions in 40 CFR 63.172(h). Subpart H. [40 CFR 63.172(f)(1)(ii)]

Which Months: All Year Statistical Basis: None specified
189 [40 CFR 63.172(d)(2)(i)] Closed-vent system (duct work): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 once initially according to the procedures in 40 CFR 63.180(b). If an instrument reading greater than 500 ppm above background is recorded, a leak is detected. If a leak is detected, initiate repair provisions in 40 CFR 63.172(h). Subpart H. [40 CFR 63.172(f)(2)(i)]

Which Months: All Year Statistical Basis: None specified
190 [40 CFR 63.172(d)(2)(ii)] Closed-vent system (duct work): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 annually according to the procedures in 40 CFR 63.180(b). If an instrument reading greater than 500 ppm above background is recorded, a leak is detected. If a leak is detected, initiate repair provisions in 40 CFR 63.172(h). Subpart H. [40 CFR 63.172(f)(2)(ii)]

Which Months: All Year Statistical Basis: None specified
191 [40 CFR 63.172(h)] Make a first attempt at repair no later than 5 calendar days after each leak is detected, and complete repairs no later than 15 calendar days after it each leak is detected, except as provided in 40 CFR 63.172(i). Subpart H. [40 CFR 63.172(h)]

192 [40 CFR 63.172(k)(1)] Closed-vent system (bypass lines): Flow monitored by flow indicator once every 15 minutes. Install flow indicator at the entrance to any bypass line. Subpart H. [40 CFR 63.172(j)(1)]
 Which Months: All Year Statistical Basis: None specified
193 [40 CFR 63.172(k)(1)] Closed-vent system (bypass lines): Flow recordkeeping by electronic or hard copy once every 15 minutes. Generate records as specified in 40 CFR 63.118(a)(3). Subpart H. [40 CFR 63.172(j)(1)]

194 [40 CFR 63.172(k)(2)] Closed-vent system (bypass lines): Secure the bypass line valve in the non-diverting position with a car-seal or a lock-and-key type configuration. Subpart H. [40 CFR 63.172(j)(2)]
195 [40 CFR 63.172(k)(2)] Closed-vent system (bypass lines): Seal or closure mechanism monitored by visual inspection/determination monthly to ensure the valve is maintained in the non-diverting position and the vent stream is not diverted through the bypass line. Subpart H. [40 CFR 63.172(j)(2)]

Which Months: All Year Statistical Basis: None specified
196 [40 CFR 63.172(k)(1)] Closed-vent system (unsafe-to-inspect): Demonstrate that the equipment is unsafe to inspect because inspecting personnel would be exposed to an imminent or potential dangers as a consequence of complying with 40 CFR 63.172(f)(1) or (f)(2). Comply with this requirement instead of the requirements in 40 CFR 63.172(f)(1) and (f)(2). Subpart H. [40 CFR 63.172(k)(1)]

SPECIFIC REQUIREMENTS

AI ID: 2218 - Praxair Inc - Geismar HYCO Facility
 Activity Number: PER20080001
 Permit Number: 0180-00031-V3
 Air - Title V Regular Permit Major Mod

FUG 0001 5-93 - Fugitives (Formaldehyde Plant)

Closed-vent system (unsafe-to-inspect): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 at the regulation's specified frequency. Maintain a written plan that requires inspection of the equipment as frequently as practicable during safe-to-inspect times, but not more frequently than annually. Comply with this requirement instead of the requirements in 40 CFR 63.172(f)(1) and (f)(2). Subpart H. [40 CFR 63.172(k)(2)]

Which Months: All Year Statistical Basis: None specified

Closed-vent system (difficult-to-inspect): Demonstrate that the equipment cannot be inspected without elevating the inspecting personnel more than 2 meters above a support surface. Comply with this requirement instead of the requirements in 40 CFR 63.172(f)(1) and (f)(2). Subpart H. [40 CFR 63.172(k)(2)]

Closed-vent system (difficult-to-inspect): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 once every five years. Maintain a written plan that requires inspection of the equipment at least once every five years. Comply with this requirement instead of the requirements in 40 CFR 63.172(f)(1) and (f)(2). Subpart H. [40 CFR 63.172(l)(2)]

Which Months: All Year Statistical Basis: None specified

Ensure that the closed-vent system or control device is operating whenever organic HAP emissions are vented to the closed-vent system or control device. Subpart H. [40 CFR 63.172(m)]

Agitators in gas/vapor service or light liquid service: Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 monthly to detect leaks, as specified in 40 CFR 63.180(b). If an instrument reading of 10,000 ppm or greater is recorded, a leak is detected. If a leak is detected, initiate repair provisions in 40 CFR 63.173(c). Subpart H. [40 CFR 63.173(a)]

Which Months: All Year Statistical Basis: None specified

Agitators in gas/vapor service or light liquid service: Presence of a leak monitored by visual inspection/determination weekly (calendar) for indications of liquids dripping from the agitator. If there are indications of liquids dripping from the agitator, a leak is detected. If a leak is detected, initiate repair provisions in 40 CFR 63.173(c). Subpart H. [40 CFR 63.173(b)]

Which Months: All Year Statistical Basis: None specified

Agitators in gas/vapor service or light liquid service: Make a first attempt at repair no later than 5 calendar days after each leak is detected, and complete repairs no later than 15 calendar days after it each leak is detected, except as provided in 40 CFR 63.171. Subpart H. [40 CFR 63.173(c)]

Agitators in gas/vapor service and light liquid service (dual mechanical seal system): Operate with the barrier fluid at a pressure that is at all times greater than the agitator stuffing box pressure; or equip with a barrier fluid degassing reservoir that is routed to a process or fuel gas system or connected by a closed-vent system to a control device that complies with the requirements of 40 CFR 63.172; or equip with a closed-loop system that purges the barrier fluid into a process stream. Comply with this requirement instead of the requirements in 40 CFR 63.173(a). Subpart H. [40 CFR 63.173(d)(1)]

Agitators in gas/vapor service and light liquid service (dual mechanical seal system): Ensure that the barrier fluid is not in light liquid organic HAP service. Comply with this requirement instead of the requirements in 40 CFR 63.173(a). Subpart H. [40 CFR 63.173(d)(2)]

Agitators in gas/vapor service and light liquid service (dual mechanical seal system): Equip barrier fluid system with a sensor that will detect failure of the seal system, barrier fluid system, or both. Comply with this requirement instead of the requirements in 40 CFR 63.173(a). Subpart H. [40 CFR 63.173(d)(3)]

197 [40 CFR 63.172(l)(1)]

198 [40 CFR 63.172(l)(2)]

199 [40 CFR 63.172(l)(2)]

200 [40 CFR 63.172(m)]

201 [40 CFR 63.173(a)]

202 [40 CFR 63.173(b)]

203 [40 CFR 63.173(c)]

204 [40 CFR 63.173(d)(1)]

205 [40 CFR 63.173(d)(2)]

206 [40 CFR 63.173(d)(3)]

SPECIFIC REQUIREMENTS

AI ID: 2218 - Praxair Inc - Geismar HYCO Facility
 Activity Number: PER20080001
 Permit Number: 0180-00031-V3
 Air - Title V Regular Permit Major Mod

FUG 0001 5-93 - Fugitives (Formaldehyde Plant)

- Agitators in gas/vapor service or light liquid service (dual mechanical seal system): Presence of a leak monitored by visual inspection/determination weekly (calendar). Monitor for indications of liquids dripping from the agitator seal. If there are indications of liquid dripping from the agitator seal at the time of the weekly inspection, monitor the agitator as specified in 40 CFR 63.180(b) to determine the presence of organic HAP in the barrier fluid. If an instrument reading of 10,000 ppm or greater is measured, a leak is detected. If a leak is detected, initiate the repair provisions in 40 CFR 63.173(d)(6). Comply with this requirement instead of the requirements in 40 CFR 63.173(a). Subpart H. [40 CFR 63.173(d)(4)]
- Which Months: All Year Statistical Basis: None specified
- Agitators in gas/vapor service and light liquid service (dual mechanical seal system): Determine, based on design considerations and operating experience, criteria that indicates failure of the seal system, the barrier fluid system, or both. Comply with this requirement instead of the requirements in 40 CFR 63.173(a). Subpart H. [40 CFR 63.173(d)(6)(i)]
- Agitators in gas/vapor service and light liquid service (dual mechanical seal system): Make a first attempt at repair no later than 5 calendar days after each leak is detected, and complete repairs no later than 15 calendar days after the leak is detected, except as provided in 40 CFR 63.171. Comply with this requirement instead of the requirements in 40 CFR 63.173(a). Subpart H. [40 CFR 63.173(d)(6)]
- Agitators in gas/vapor service or light liquid service (dual mechanical seal system - sensor): Equipment/operational data monitored by visual inspection/determination daily, or equip with an audible alarm unless the agitator is located within the boundary of an unmanned plant site. If the sensor indicates failure of the seal system, the barrier fluid system, or both based on the criteria established in 40 CFR 63.173(d)(6), a leak is detected. If a leak is detected, initiate repair provisions specified in 40 CFR 63.173(d)(6). Comply with this requirement instead of the requirements in 40 CFR 63.173(a). Subpart H. [40 CFR 63.173(d)]
- Which Months: All Year Statistical Basis: None specified
- Agitators in gas/vapor service or light liquid service (difficult-to-monitor): Demonstrate that the agitator cannot be monitored without elevating the monitoring personnel more than two meters above a support surface or it is not accessible at anytime in a safe manner. Comply with this requirement instead of the requirements in 40 CFR 63.173(a) through (d). Subpart H. [40 CFR 63.173(h)(1)]
- Agitators in gas/vapor service or light liquid service (difficult-to-monitor): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 annually. Maintain a written plan that requires monitoring of the agitator at least once per calendar year. Comply with this requirement instead of the requirements in 40 CFR 63.173(a) through (d). Subpart H. [40 CFR 63.173(h)(3)]
- Which Months: All Year Statistical Basis: None specified
- Agitators in gas/vapor service or light liquid service (unsafe-to-monitor): Demonstrate that the agitator is unsafe to monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with 40 CFR 63.173(a) through (d). Comply with this requirement instead of the requirements in 40 CFR 63.173(a) through (d). Subpart H. [40 CFR 63.173(j)(1)]
- Agitators in gas/vapor service or light liquid service (unsafe-to-monitor): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 at the regulation's specified frequency. Maintain a written plan that requires monitoring of the agitator as frequently as practicable during safe-to-monitor times, but not more frequently than the periodic monitoring schedule otherwise applicable. Comply with this requirement instead of the requirements in 40 CFR 63.173(a) through (d). Subpart H. [40 CFR 63.173(j)(2)]
- Which Months: All Year Statistical Basis: None specified

SPECIFIC REQUIREMENTS

AI ID: 2218 - Praxair Inc - Geismar HYCO Facility
 Activity Number: PER200B0001
 Permit Number: 0180-00031-V3
 Air - Title V Regular Permit Major Mod

FUG 0001 5-93 - Fugitives (Formaldehyde Plant)

- 215 [40 CFR 63.174(b)(1)] Connectors in gas/vapor service or light liquid service: Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 once within 12 months after the compliance date, except as provided in 40 CFR 63.174(f) through (h). If an instrument reading of 500 ppm or greater is recorded, a leak is detected. If a leak is detected, initiate repair provisions in 40 CFR 63.174(d). Subpart H. [40 CFR 63.174(b)(1)]
- Which Months: All Year Statistical Basis: None specified
- 216 [40 CFR 63.174(b)(2)] Connectors in gas/vapor service or light liquid service: Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 once within the first 12 months after initial startup or by no later than 12 months after the date of promulgation of a specific subpart that references 40 CFR 63 Subpart H, whichever is later, except as specified in 40 CFR 63.174(f) through (h). If an instrument reading of 500 ppm or greater is recorded, a leak is detected. If a leak is detected, initiate repair provisions in 40 CFR 63.174(d). Subpart H. [40 CFR 63.174(b)(2)]
- Which Months: All Year Statistical Basis: None specified
- 217 [40 CFR 63.174(b)(3)(i)] Connectors in gas/vapor service or light liquid service (0.5% or greater leaking): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 annually. Subpart H. [40 CFR 63.174(b)(3)(i)]
- Which Months: All Year Statistical Basis: None specified
- 218 [40 CFR 63.174(b)(3)(ii)] Connectors in gas/vapor service or light liquid service (less than 0.5% leaking): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 once every two years. Subpart H. [40 CFR 63.174(b)(3)(ii)]
- Which Months: All Year Statistical Basis: None specified
- 219 [40 CFR 63.174(c)(1)(i)] Connectors in gas/vapor service or light liquid service (opened or otherwise had the seal broken): Presence of a leak monitored by 40 CFR 60, Appendix A, Method 21 within three months after being returned to organic HAP service or when it is reconnected. If monitoring detects a leak, repair according to the provisions of 40 CFR 63.174(d), as specified, except as provided in 40 CFR 63.174(c)(1)(ii). Subpart H. [40 CFR 63.174(c)(1)(i)]
- Which Months: All Year Statistical Basis: None specified
- 220 [40 CFR 63.174(c)(2)(i)] Connectors in gas/vapor service or light liquid service (2 inches or less in nominal diameter): Comply with the requirements of 40 CFR 63.169. Subpart H. [40 CFR 63.174(c)(2)(i)]
- 221 [40 CFR 63.174(c)(2)(ii)] Connectors in gas/vapor service or light liquid service (2 inches or less in nominal diameter): Organic HAP monitored by technically sound method within three months after being returned to organic HAP service after having been opened or otherwise had the seal broken. If monitoring detects a leak, implement repair provisions in 40 CFR 63.174(d). Subpart H. [40 CFR 63.174(c)(2)(ii)]
- Which Months: All Year Statistical Basis: None specified
- 222 [40 CFR 63.174(d)] Connectors in gas/vapor service or light liquid service: Make a first attempt at repair no later than 5 calendar days after each leak is detected, and complete repairs no later than 15 calendar days after it each leak is detected, except as provided in 40 CFR 63.171 and 63.174(B). Subpart H. [40 CFR 63.174(d)]
- 223 [40 CFR 63.174(f)(1)] Connectors in gas/vapor service or light liquid service (unsafe-to-monitor): Demonstrate that the connector is unsafe to monitor because personnel would be exposed to an immediate danger as a result of complying with 40 CFR 63.174(a) through (c). Comply with this requirement instead of the requirements in 40 CFR 63.174(a). Subpart H. [40 CFR 63.174(f)(1)]
- 224 [40 CFR 63.174(f)(2)] Connectors in gas/vapor service or light liquid service (unsafe-to-monitor): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 at the regulation's specified frequency. Maintain a written plan that requires monitoring of connectors as frequently as practicable during safe to requirements in 40 CFR 63.174(a). Subpart H. [40 CFR 63.174(f)(2)]
- Which Months: All Year Statistical Basis: None specified

SPECIFIC REQUIREMENTS

AI ID: 2218 - Praxair Inc - Geismar HYCO Facility
 Activity Number: PER20080001
 Permit Number: 0180-Q0031-V3
 Air - Title V Regular Permit Major Mod

FUG 0001 5-93 - Fugitives (Formaldehyde Plant)

Connectors in gas/vapor service or light liquid service (unsafe-to-repair): Demonstrate that repair personnel would be exposed to an immediate danger as a consequence of complying with 40 CFR 63.174(d). Comply with this requirement instead of the requirements in 40 CFR 63.174(a), (d), and (e). Subpart H. [40 CFR 63.174(g)]

Connectors in gas/vapor service or light liquid service (inaccessible, ceramic, or ceramic-lined): Make a first attempt at repair within 5 days after leak is detected by visual, audible, olfactory or other means, and complete repairs no later than 15 calendar days after leak is detected, except as provided in 40 CFR 63.171 and 63.174(g). Comply with this requirement instead of the monitoring requirements of 40 CFR 63.174(a) and (c) and from the recordkeeping and reporting requirements of 40 CFR 63.181 and 63.182. Subpart H. [40 CFR 63.174(h)(2)]

Connectors in gas/vapor service or light liquid service: Calculate percent leaking connectors as specified in 40 CFR 63.174(i)(1) and (i)(2). Subpart H. [40 CFR 63.174(i)]

Comply with the test methods and procedures requirements provided in 40 CFR 63.180. Subpart H.
 Equipment/operational data recordkeeping by electronic or hard copy at the regulation's specified frequency. Maintain records as specified in 40 CFR 63.181(a) through (k). Subpart H.

Submit Periodic Reports: Due semiannually starting 6 months after the Notification of Compliance Status, as required in 40 CFR 63.182(c).
 Include the information specified in 40 CFR 63.182(d)(2) through (d)(4). Subpart H. [40 CFR 63.182(d)]
 Equip all rotary pumps and compressors handling volatile organic compounds having a true vapor pressure of 1.5 psia or greater at handling conditions with mechanical seals or other equivalent equipment.
 Comply with 40 CFR 63 Subpart H in accordance with streamlined LDAR fugitives monitoring program defined in Appendix A.

FUG 0002 8-93 - Fugitives (Methanol Plant)

Comply with 40 CFR 63 Subpart H in accordance with streamlined LDAR fugitives monitoring program defined in Appendix A.
 Identify each piece of equipment in a process unit such that it can be distinguished readily from equipment that is not subject to 40 CFR 63 Subpart H. Subpart H. [40 CFR 63.162(c)]

Clearly identify leaking equipment detected as specified in 40 CFR 63.163, 40 CFR 63.164, 40 CFR 63.168, 40 CFR 63.169, and 40 CFR 63.172 through 63.174. The identification may be removed after the equipment is repaired, except for valves or for connectors subject to 40 CFR 63.174(c)(1)(i). The identification on a valve may be removed after it has been monitored as specified in 40 CFR 63.168(f)(3) and 63.175(e)(i)(D), and no leak has been detected during the follow-up monitoring. If electing to comply using the provisions of 40 CFR 63.174(c)(1)(i), the identification on a connector may be removed after it is monitored as specified in 40 CFR 63.174(c)(1)(i) and no leak is detected during that monitoring. Subpart H. [40 CFR 63.162(f)]

Pumps in light liquid service: Organic HAP monitored by 40 CFR 60, Appendix A, Method 2; monthly to detect leaks, except as provided in 40 CFR 63.162(b) and 63.163(e) through (j). If a reading of 10,000 ppm (phase I); or 5,000 ppm (phase II); or 5,000 ppm (phase III, pumps handling polymerizing monomers), 2,000 ppm (phase III, pumps in food/meat service), or 1,000 ppm (phase III, all other pumps) or greater is recorded, a leak is detected. If a leak is detected, initiate repair provisions specified in 40 CFR 63.163(c). Subpart H. [40 CFR 63.163(b)(1)] Which Months: All Year Statistical Basis: None specified

SPECIFIC REQUIREMENTS

AI ID: 2218 - Praxair Inc - Geismar NYCO Facility
Activity Number: PER20080001
Permit Number: 0180-00031-V3
Air - Title V Regular Permit Major Mod

FUG 0002 8-93 - Fugitives (Methanol Plant)

- Pumps in light liquid service: Presence of a leak monitored by visual inspection/determination weekly (calendar). Monitor for indications of liquids dripping from the pump seal. If there are indications of liquids dripping from the pump seal, a leak is detected. If a leak is detected, initiate the repair provisions specified in 40 CFR 63.163(c). Subpart H. [40 CFR 63.163(b)(3)]
- Which Months: All Year Statistical Basis: None specified
- Pumps in light liquid service: Make a first attempt at repair no later than 5 calendar days after a leak is detected, and complete repairs no later than 15 calendar days after the leak is detected, except as provided in 40 CFR 63.163(c)(3) and 40 CFR 63.163(c)]
- Pumps in light liquid service: Implement a quality improvement program for pumps that complies with the requirements of 40 CFR 63.176, if, in Phase III, calculated on a 6-month rolling average, the greater of either 10 percent of the pumps in a process unit or three pumps in a process unit leak. Subpart H. [40 CFR 63.163(d)(2)]
- Pumps in light liquid service: Determine percent leaking pumps using the equation in 40 CFR 63.163(d)(4). Subpart H. [40 CFR 63.163(d)(4)]
- Pumps in light liquid service (dual mechanical seal system): Operate with the barrier fluid at a pressure that is at all times greater than the pump stuffing box pressure; or equip with a barrier fluid degassing reservoir that is routed to a process or fuel gas system or connected by a closed-vent system to a control device that complies with the requirements of 40 CFR 63.172; or equip with a closed-loop system that purges the barrier fluid into a process stream. Comply with this requirement instead of the requirements in 40 CFR 63.163(a) through (d). Subpart H. [40 CFR 63.163(e)(1)]
- Pumps in light liquid service (dual mechanical seal system): Ensure that the barrier fluid is not in light liquid service. Comply with this requirement instead of the requirements in 40 CFR 63.163(a) through (d). Subpart H. [40 CFR 63.163(e)(2)]
- Pumps in light liquid service (dual mechanical seal system): Equip barrier fluid system with a sensor that will detect failure of the seal system, barrier fluid system, or both. Comply with this requirement instead of the requirements in 40 CFR 63.163(a) through (d). Subpart H. [40 CFR 63.163(e)(3)]
- Pumps in light liquid service (dual mechanical seal system): Presence of a leak monitored by visual inspection/determination weekly (calendar). Monitor for indications of liquids dripping from the pump seal. If there are indications of liquids dripping from the pump seal at the time of the weekly inspection, monitor the pump as specified in 40 CFR 63.180(b) to determine if there is a leak of organic HAP in the barrier fluid. If an instrument reading of 1,000 ppm or greater is measured, a leak is detected. If a leak is detected, initiate the repair provisions in 40 CFR 63.163(e)(6). Comply with this requirement instead of the requirements in 40 CFR 63.163(a) through (d). Subpart H. [40 CFR 63.163(e)(4)]
- Which Months: All Year Statistical Basis: None specified
- Pumps in light liquid service (dual mechanical seal system): Determine, based on design considerations and operating experience, criteria that indicates failure of the seal system, the barrier fluid system, or both. Comply with this requirement instead of the requirements in 40 CFR 63.163(a) through (d). Subpart H. [40 CFR 63.163(e)(6)(i)]
- Pumps in light liquid service (dual mechanical seal system): Make a first attempt at repair no later than 5 calendar days after each leak is detected, and complete repairs no later than 15 calendar days after the leak is detected, except as provided in 40 CFR 63.171. Comply with this requirement instead of the requirements in 40 CFR 63.163(a) through (d). Subpart H. [40 CFR 63.163(e)(6)]

SPECIFIC REQUIREMENTS

AI ID: 2218 - Praxair Inc - Geismar HYCO Facility
 Activity Number: PER20080001
 Permit Number: 0180-00031-V3
 Air - Title V Regular Permit Major Mod

FUG 0002 8-93 - Fugitives (Methanol Plant)

Pumps in light liquid service (dual mechanical seal system - sensor): Equipment/operational data monitored by visual inspection/determination daily, or equip with an audible alarm unless the pump is located within the boundary of an unmanned plant site. If the sensor indicates failure of the seal system, the barrier fluid system, or both based on the criteria established in 40 CFR 63.163(e)(6), a leak is detected. If a leak is detected, initiate repair provisions specified in 40 CFR 63.163(e)(6). Comply with this requirement instead of the requirements in 40 CFR 63.163(a) through (d). Subpart H. [40 CFR 63.163(e)]

Which Months: All Year Statistical Basis: None specified

Pumps in light liquid service (unsafe-to-monitor): Determine that the pump is unsafe-to-monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with 40 CFR 63.163(b) through (d). Comply with this requirement instead of the requirements in 40 CFR 63.163(b) through (e). Subpart H. [40 CFR 63.163(j)(1)]

Pumps in light liquid service (unsafe-to-monitor): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 at the regulation's specified frequency. Maintain a written plan that requires monitoring of the pump as frequently as practicable during safe-to-monitor times but not more frequently than the periodic monitoring schedule otherwise applicable. Comply with this requirement instead of the requirements in 40 CFR 63.163(b) through (e). Subpart H. [40 CFR 63.163(j)(2)]

Which Months: All Year Statistical Basis: None specified

Compressors: Equip with a seal system that includes a barrier fluid system and that prevents leakage of process fluid to the atmosphere, except as provided in 40 CFR 63.162(b) and 40 CFR 63.164(h) and (i). Subpart H. [40 CFR 63.164(a)]

Compressors: Operate the seal system with the barrier fluid at a pressure that is greater than the compressor stuffing box pressure; or equip with a barrier fluid system degassing reservoir that is routed to a process or fuel gas system or connected by a closed-vent system to a control device that complies with the requirements of 40 CFR 63.172; or equip with a closed-loop system that purges the barrier fluid directly into a process stream. Subpart H. [40 CFR 63.164(b)]

Compressors: Ensure that the barrier fluid is not in light liquid service. Subpart H. [40 CFR 63.164(c)]

Compressors: Equip each barrier fluid system as described in 40 CFR 63.164(a) through (c) with a sensor that will detect failure of the seal system, barrier fluid system, or both. Subpart H. [40 CFR 63.164(d)]

Compressors (sensor): Determine, based on design considerations and operating experience, a criterion that indicates failure of the seal system, the barrier fluid system, or both. Subpart H. [40 CFR 63.164(e)(2)]

Compressors: Make a first attempt at repair no later than 5 calendar days after each leak is detected, and complete repairs no later than 15 calendar days after each leak is detected, except as provided in 40 CFR 63.171. Subpart H. [40 CFR 63.164(g)]

Compressors (no detectable emissions): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 once initially and annually, and at other times requested by DEQ. Comply with this requirement instead of the requirements in 40 CFR 63.164(a) through (h). Subpart H. [40 CFR 63.164(i)(2)]

Which Months: All Year Statistical Basis: None specified

Compressors (sensor): Equipment/operational data monitored by visual inspection/determination daily, or equip with an alarm, unless the compressor is located within the boundary of an unmanned plant site. If the sensor indicates failure of the seal system, the barrier fluid system, or both based on the criterion determined under 40 CFR 63.164(e)(2), a leak is detected. If a leak is detected, initiate repair provisions specified in 40 CFR 63.164(g). Subpart H.

Which Months: All Year Statistical Basis: None specified

SPECIFIC REQUIREMENTS

AI ID: 2218 - Praxair Inc - Geismar HYCO Facility
 Activity Number: PER2008001
 Permit Number: 0180-0031-V3
 Air - Title V Regular Permit Major Mod

FUG 0002 8-93 - Fugitives (Methanol Plant)

- Pressure relief device in gas/vapor service: Organic HAP < 500 ppm above background except during pressure releases, as determined by the method specified in 63.180(c). Subpart H. [40 CFR 63.165(a)]
 Which Months: All Year Statistical Basis: None specified
 Pressure relief devices in gas/vapor service: After each pressure release, return to a condition indicated by an instrument reading of less than 500 ppm above background, as soon as practicable, but no later than 5 calendar days after each pressure release, except as provided in 40 CFR 63.171. Subpart H. [40 CFR 63.165(b)(1)]
- Pressure relief devices in gas/vapor service: Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 within 5 days (calendar) after the pressure release and being returned to organic HAP service, to confirm the condition indicated by an instrument reading of less than 500 ppm above background, as measured by the method specified in 40 CFR 63.180(c). Subpart H. [40 CFR 63.165(b)(2)]
- Which Months: All Year Statistical Basis: None specified
 Pressure relief devices in gas/vapor service (rupture disk): After each pressure release, install a new rupture disk upstream of the pressure relief device as soon as practicable, but no later than 5 calendar days after each pressure release, except as provided in 40 CFR 63.171. Comply with this requirement instead of the requirements in 40 CFR 63.165(a) and (b). Subpart H. [40 CFR 63.165(d)(2)]
- Sampling connection systems: Equip with a closed-purge, closed-loop, or closed-vent system, except as provided in 40 CFR 63.162(b). Operate the system as specified in 40 CFR 63.166(b). Subpart H.
- Open-ended valves or lines: Equip with a cap, blind flange, plug, or a second valve, except as provided in 40 CFR 63.162(b) and 40 CFR 63.167(d) and (e). Ensure that the cap, blind flange, plug or second valve seals the open end at all times except during operations requiring process fluid flow through the open-ended valve or line, or during maintenance or repair. Operate each open-ended valve or line equipped with a second valve in a manner such that the valve on the process fluid end is closed before the second valve is closed. Subpart H.
- Valves in gas/vapor service or liquid service (Phase II): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 quarterly, as specified in 40 CFR 63.180(b). If an instrument reading of 500 ppm or greater is recorded, a leak is detected, initiate repair provisions in 40 CFR 63.168(f). Subpart H. [40 CFR 63.168(c)]
- Which Months: All Year Statistical Basis: None specified
 Valves in gas/vapor service or liquid service (Phase III, 2 percent or greater leaking valves): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 monthly, as specified in 40 CFR 63.180(b); or implement a quality improvement program for valves that complies with the requirements of 40 CFR 63.175 and monitor quarterly. If an instrument reading of 500 ppm or greater is recorded, a leak is detected. If a leak is detected, initiate repair provisions in 40 CFR 63.168(f). If electing to implement a quality improvement program, follow the procedures in 40 CFR 63.175. Subpart H. [40 CFR 63.168(d)(1)]
- Which Months: All Year Statistical Basis: None specified
 Valves in gas/vapor service or liquid service (Phase III, less than 2 percent leaking valves): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 quarterly, as specified in 40 CFR 63.180(b). If an instrument reading of 500 ppm or greater is recorded, a leak is detected. If a leak is detected, initiate repair provisions in 40 CFR 63.168(f). Permittee may elect to comply with the alternate standards in 40 CFR 63.168(d)(3) and (d)(4). Subpart H. [40 CFR 63.168(d)(2)]
- Which Months: All Year Statistical Basis: None specified
 Valves in gas/vapor service or liquid service: Determine percent leaking valves using the equation in 40 CFR 63.168(e)(1). Subpart H. [40 CFR 63.168(e)(1)]
- 258 [40 CFR 63.165(a)]
 259 [40 CFR 63.165(b)(1)]
 260 [40 CFR 63.165(b)(2)]
 261 [40 CFR 63.165(d)(2)]
 262 [40 CFR 63.166]
 263 [40 CFR 63.167]
 264 [40 CFR 63.168(c)]
 265 [40 CFR 63.168(d)(1)]
 266 [40 CFR 63.168(d)(2)]
 267 [40 CFR 63.168(e)(1)]

SPECIFIC REQUIREMENTS

AI ID: 2218 - Praxair Inc - Geismar HYCO Facility
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FUG 0002 8-93 - Fugitives (Methanol Plant)

- 268 [40 CFR 63.168(i)(3)] Valves in gas/vapor service or light liquid service (after leak repair): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 once within three months (at least) after repair to determine whether the valve has resumed leaking. Subpart H. [40 CFR 63.168(h)(3)]
- Which Months: All Year Statistical Basis: None specified
- 269 [40 CFR 63.168(j)] Valves in gas/vapor service or light liquid service: Make a first attempt at repair no later than 5 calendar days after a leak is detected, and complete repairs no later than 15 calendar days after the leak is detected, except as provided in 40 CFR 63.171. Subpart H. [40 CFR 63.168(j)]
- 270 [40 CFR 63.168(h)(1)] Valves in gas/vapor service or light liquid service (unsafe-to-monitor): Demonstrate that the valve is unsafe to monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with 40 CFR 63.168(b) through (d). Comply with this requirement instead of the requirements in 40 CFR 63.168(b) through (f). Subpart H. [40 CFR 63.168(h)(1)]
- 271 [40 CFR 63.168(h)(2)] Valves in gas/vapor service or light liquid service (unsafe-to-monitor): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 at the regulation's specified frequency. Maintain a written plan that requires monitoring of the valves as frequently as practicable during safe-to-monitor times, but not more frequently than the periodic monitoring schedule otherwise applicable. Comply with this requirement instead of the requirements in 40 CFR 63.168(b) through (f). Subpart H. [40 CFR 63.168(h)(2)]
- Which Months: All Year Statistical Basis: None specified
- 272 [40 CFR 63.168(i)(1)] Valves in gas/vapor service or light liquid service (difficult-to-monitor): Demonstrate that the valve cannot be monitored without elevating the monitoring personnel more than 2 meters above a support surface or it is not accessible at anytime in a safe manner. Comply with this requirement instead of the requirements in 40 CFR 63.168(b) through (d). Subpart H. [40 CFR 63.168(i)(1)]
- 273 [40 CFR 63.168(i)(3)] Valves in gas/vapor service or light liquid service (difficult-to-monitor): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 annually. Maintain a written plan that requires monitoring of the valves at least once per calendar year. Comply with this requirement instead of the requirements in 40 CFR 63.168(b) through (d). Subpart H. [40 CFR 63.168(i)(3)]
- Which Months: All Year Statistical Basis: None specified
- 274 [40 CFR 63.169(a)] Pumps, valves, connectors, and agitators in heavy liquid service; instrumentation systems; and pressure relief devices in liquid service: Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 within 5 days (calendar) if evidence of a potential leak to the atmosphere is found by visible, audible, olfactory, or any other detection method. If a reading of 10,000 ppm for agitators, 5,000 ppm for pumps handling polymerizing monomers, 2,000 ppm for all other pumps (including pumps in food/medical service), or 500 ppm for valves, connectors, instrumentation systems, and pressure relief devices, or greater is recorded, a leak is detected. If a leak is detected, initiate repair provisions specified in 40 CFR 63.169(c). Subpart H. [40 CFR 63.169(a)]
- Which Months: All Year Statistical Basis: None specified
- 275 [40 CFR 63.169(c)] Pumps, valves, connectors, and agitators in heavy liquid service; instrumentation systems; and pressure relief devices in liquid service: Make a first attempt at repair no later than 5 calendar days after each leak is detected, and complete repairs no later than 15 calendar days after it each leak is detected, except as provided in 40 CFR 63.171. Subpart H. [40 CFR 63.169(c)]
- 276 [40 CFR 63.170] Surge control vessels and bottoms receivers: Equip with a closed-vent system that routes the organic vapors vented from the surge control vessel or bottoms receiver back to the process or to a control device that complies with the requirements of 40 CFR 63.172, except as provided in 40 CFR 63.162(b), or comply with the requirements of 40 CFR 63.119(b) or (c), if surge control vessel or bottoms receiver is not routed back to the process and meets the conditions specified in 40 CFR 63 Subpart H Table 2 or Table 3. Subpart H.

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277	[40 CFR 63.172(f)(1)(i)]	Closed-vent system (hard-piping): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 once initially according to the procedures in 40 CFR 63.180(b). If an instrument reading greater than 500 ppm above background is recorded, a leak is detected. If a leak is detected, initiate repair provisions in 40 CFR 63.172(h). Subpart H. [40 CFR 63.172(f)(1)(i)]
278	[40 CFR 63.172(f)(1)(ii)]	Which Months: All Year Statistical Basis: None specified Closed-vent system (hard-piping): Presence of a leak monitored by visual, audible, and/or olfactory annually. If a leak is detected, initiate repair provisions in 40 CFR 63.172(h). Subpart H. [40 CFR 63.172(f)(1)(ii)]
279	[40 CFR 63.172(f)(2)(i)]	Which Months: All Year Statistical Basis: None specified Closed-vent system (duct work): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 once initially according to the procedures in 40 CFR 63.180(b). If an instrument reading greater than 500 ppm above background is recorded, a leak is detected. If a leak is detected, initiate repair provisions in 40 CFR 63.172(h). Subpart H. [40 CFR 63.172(f)(2)(i)]
280	[40 CFR 63.172(f)(2)(ii)]	Which Months: All Year Statistical Basis: None specified Closed-vent system (duct work): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 annually according to the procedures in 40 CFR 63.180(b). If an instrument reading greater than 500 ppm above background is recorded, a leak is detected. If a leak is detected, initiate repair provisions in 40 CFR 63.172(h). Subpart H. [40 CFR 63.172(f)(2)(ii)]
281	[40 CFR 63.172(h)]	Which Months: All Year Statistical Basis: None specified Make a first attempt at repair no later than 5 calendar days after each leak is detected, and complete repairs no later than 15 calendar days after it each leak is detected, except as provided in 40 CFR 63.172(i). Subpart H. [40 CFR 63.172(h)]
282	[40 CFR 63.172(j)(1)]	Closed-vent system (bypass lines): Flow monitored by flow indicator once every 15 minutes. Install flow indicator at the entrance to any bypass line. Subpart H. [40 CFR 63.172(j)(1)]
283	[40 CFR 63.172(j)(1)]	Which Months: All Year Statistical Basis: None specified Closed-vent system (bypass lines): Flow recordkeeping by electronic or hard copy once every 15 minutes. Generate records as specified in 40 CFR 63.118(a)(3). Subpart H. [40 CFR 63.172(j)(1)]
284	[40 CFR 63.172(j)(2)]	Closed-vent system (bypass lines): Secure the bypass line valve in the non-diverting position with a car-seal or a lock-and-key type configuration. Subpart H. [40 CFR 63.172(j)(2)]
285	[40 CFR 63.172(j)(2)]	Closed-vent system (bypass lines): Seal or closure mechanism monitored by visual inspection/determination monthly to ensure the valve is maintained in the non-diverting position and the vent stream is not diverted through the bypass line. Subpart H. [40 CFR 63.172(j)(2)]
286	[40 CFR 63.172(k)(1)]	Which Months: All Year Statistical Basis: None specified Closed-vent system (unsafe-to-inspect): Demonstrate that the equipment is unsafe to inspect because inspecting personnel would be exposed to an imminent or potential dangers as a consequence of complying with 40 CFR 63.172(h)(1) or (f)(2). Comply with this requirement instead of the requirements in 40 CFR 63.172(h)(1) and (f)(2). Subpart H. [40 CFR 63.172(k)(1)]
287	[40 CFR 63.172(k)(2)]	Closed-vent system (unsafe-to-inspect): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 at the regulation's specified frequency. Maintain a written plan that requires inspection of the equipment as practicable during safe-to-inspect times, but not more frequently than annually. Comply with this requirement instead of the requirements in 40 CFR 63.172(h)(1) and (f)(2). Subpart H. [40 CFR 63.172(k)(2)]
		Which Months: All Year Statistical Basis: None specified

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- 288 [40 CFR 63.172(l)(1)] Closed-vent system (difficult-to-inspect): Demonstrate that the equipment cannot be inspected without elevating the inspecting personnel more than 2 meters above a support surface. Comply with this requirement instead of the requirements in 40 CFR 63.172(f)(1) and (f)(2). Subpart H. [40 CFR 63.172(l)(1)]
- 289 [40 CFR 63.172(l)(2)] Closed-vent system (difficult-to-inspect): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 once every five years. Maintain a written plan that requires inspection of the equipment at least once every five years. Comply with this requirement instead of the requirements in 40 CFR 63.172(f)(1) and (f)(2). Subpart H. [40 CFR 63.172(l)(2)]
- 290 [40 CFR 63.172(m)] Which Months: All Year Statistical Basis: None specified Ensure that the closed-vent system or control device is operating whenever organic HAP emissions are vented to the closed-vent system or control device. Subpart H. [40 CFR 63.172(m)]
- 291 [40 CFR 63.173(a)] Agitators in gas/vapor service or light liquid service: Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 monthly to detect leaks, as specified in 40 CFR 63.180(b). If an instrument reading of 10,000 ppm or greater is recorded, a leak is detected. If a leak is detected, initiate repair provisions in 40 CFR 63.173(c). Subpart H. [40 CFR 63.173(a)]
- 292 [40 CFR 63.173(b)] Which Months: All Year Statistical Basis: None specified Agitators in gas/vapor service or light liquid service: Presence of a leak monitored by visual inspection/determination weekly (calendar) for indications of liquids dripping from the agitator. If there are indications of liquids dripping from the agitator, a leak is detected. If a leak is detected, initiate repair provisions in 40 CFR 63.173(c). Subpart H. [40 CFR 63.173(b)]
- 293 [40 CFR 63.173(c)] Which Months: All Year Statistical Basis: None specified Agitators in gas/vapor service or light liquid service: Make a first attempt at repair no later than 5 calendar days after each leak is detected, and complete repairs no later than 15 calendar days after it each leak is detected, except as provided in 40 CFR 63.171. Subpart H. [40 CFR 63.173(c)]
- 294 [40 CFR 63.173(d)(1)] Agitators in gas/vapor service and light liquid service (dual mechanical seal system): Operate with the barrier fluid at a pressure that is at all times greater than the agitator stuffing box pressure; or equip with a barrier fluid degassing reservoir that is routed to a process or fuel gas system or connected by a closed-vent system to a control device that complies with the requirements of 40 CFR 63.172; or equip with a closed-loop system that purges the barrier fluid into a process stream. Comply with this requirement instead of the requirements in 40 CFR 63.173(a). Subpart H. [40 CFR 63.173(d)(1)]
- 295 [40 CFR 63.173(d)(2)] Agitators in gas/vapor service and light liquid service (dual mechanical seal system): Ensure that the barrier fluid is not in light liquid organic HAP service. Comply with this requirement instead of the requirements in 40 CFR 63.173(a). Subpart H. [40 CFR 63.173(d)(2)]
- 296 [40 CFR 63.173(d)(3)] Agitators in gas/vapor service and light liquid service (dual mechanical seal system): Equip barrier fluid system with a sensor that will detect failure of the seal system, barrier fluid system, or both. Comply with this requirement instead of the requirements in 40 CFR 63.173(a). Subpart H. [40 CFR 63.173(d)(3)]
- 297 [40 CFR 63.173(d)(4)] Agitators in gas/vapor service or light liquid service (dual mechanical seal system): Presence of a leak monitored by visual inspection/determination weekly (calendar). Monitor for indications of liquids dripping from the agitator seal. If there are indications of liquid dripping from the agitator seal at the time of the weekly inspection, monitor the agitator as specified in 40 CFR 63.180(b) to determine the presence of organic HAP in the barrier fluid. If an instrument reading of 10,000 ppm or greater is measured, a leak is detected. If a leak is detected, initiate the repair provisions in 40 CFR 63.173(d)(6). Comply with this requirement instead of the requirements in 40 CFR 63.173(a). Subpart H. [40 CFR 63.173(d)(4)]
- 298 [40 CFR 63.173(d)(4)] Which Months: All Year Statistical Basis: None specified

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Agitators in gas/vapor service and light liquid service (dual mechanical seal system): Determine, based on design considerations and operating experience, criteria that indicates failure of the seal system, the barrier fluid system, or both. Comply with this requirement instead of the requirements in 40 CFR 63.173(a). Subpart H. [40 CFR 63.173(d)(6)(i)]

Agitators in gas/vapor service and light liquid service (dual mechanical seal system): Make a first attempt at repair no later than 5 calendar days after each leak is detected, and complete repairs no later than 15 calendar days after the leak is detected, except as provided in 40 CFR 63.171. Comply with this requirement instead of the requirements in 40 CFR 63.173(a). Subpart H. [40 CFR 63.173(d)(6)(i)]

Agitators in gas/vapor service or light liquid service (dual mechanical seal system - sensor): Equipment/operational data monitored by visual inspection/determination daily, or equip with an audible alarm unless the agitator is located within the boundary of an unmanned plant site. If the sensor indicates failure of the seal system, the barrier fluid system, or both based on the criteria established in 40 CFR 63.173(d)(6), a leak is detected. If a leak is detected, initiate repair provisions specified in 40 CFR 63.173(d)(6). Comply with this requirement instead of the requirements in 40 CFR 63.173(a). Subpart H. [40 CFR 63.173(d)]

Which Months: All Year Statistical Basis: None specified

Agitators in gas/vapor service or light liquid service (difficult-to-monitor): Demonstrate that the agitator cannot be monitored without elevating the monitoring personnel more than two meters above a support surface or it is not accessible at anytime in a safe manner. Comply with this requirement instead of the requirements in 40 CFR 63.173(a) through (d). Subpart H. [40 CFR 63.173(h)(1)]

Agitators in gas/vapor service or light liquid service (difficult-to-monitor): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 annually. Maintain a written plan that requires monitoring of the agitator at least once per calendar year. Comply with this requirement instead of the requirements in 40 CFR 63.173(a) through (d). Subpart H. [40 CFR 63.173(h)(3)]

Which Months: All Year Statistical Basis: None specified

Agitators in gas/vapor service or light liquid service (unsafe-to-monitor): Demonstrate that the agitator is unsafe to monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with 40 CFR 63.173(a) through (d). Comply with this requirement instead of the requirements in 40 CFR 63.173(a) through (d). Subpart H. [40 CFR 63.173(j)(1)]

Agitators in gas/vapor service or light liquid service (unsafe-to-monitor): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 at the regulator's specified frequency. Maintain a written plan that requires monitoring of the agitator as frequently as practicable during safe-to-monitor times, but not more frequently than the periodic monitoring otherwise applicable. Comply with this requirement instead of the requirements in 40 CFR 63.173(a) through (d). Subpart H. [40 CFR 63.173(j)(2)]

Which Months: All Year Statistical Basis: None specified

Connectors in gas/vapor service or light liquid service: Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 once within 12 months after the compliance date, except as provided in 40 CFR 63.174(f) through (h). If an instrument reading of 500 ppm or greater is recorded, a leak is detected. If a leak is detected, initiate repair provisions in 40 CFR 63.174(d). Subpart H. [40 CFR 63.174(b)(1)]

Which Months: All Year Statistical Basis: None specified

Connectors in gas/vapor service or light liquid service: Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 once within the first 12 months after initial startup or by no later than 12 months after the date of promulgation of a specific subpart that references 40 CFR 63 Subpart H, whichever is later, except as specified in 40 CFR 63.174(f) through (h). If an instrument reading of 500 ppm or greater is recorded, a leak is detected. If a leak is detected, initiate repair provisions in 40 CFR 63.174(d). Subpart H. [40 CFR 63.174(b)(2)]

Which Months: All Year Statistical Basis: None specified

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- 307 [40 CFR 63.174(b)(3)(ii)] Connectors in gas/vapor service or light liquid service (0.5% or greater leaking): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 annually. Subpart H. [40 CFR 63.174(b)(3)(i)]
 Which Months: All Year Statistical Basis: None specified
- 308 [40 CFR 63.174(b)(3)(ii)] Connectors in gas/vapor service or light liquid service (less than 0.5% leaking): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 once every two years. Subpart H. [40 CFR 63.174(b)(3)(ii)]
 Which Months: All Year Statistical Basis: None specified
- 309 [40 CFR 63.174(c)(1)(i)] Connectors in gas/vapor service or light liquid service (opened or otherwise had the seal broken): Presence of a leak monitored by 40 CFR 60, Appendix A, Method 21 within three months after being returned to organic HAP service or when it is reconnected. If monitoring detects a leak, repair according to the provisions of 40 CFR 63.174(d), as specified, except as provided in 40 CFR 63.174(c)(1)(ii). Subpart H. [40 CFR 63.174(c)(1)(i)]
- 310 [40 CFR 63.174(c)(2)(i)] Connectors in gas/vapor service or light liquid service (2 inches or less in nominal diameter): Comply with the requirements of 40 CFR 63.169.
 Subpart H. [40 CFR 63.174(c)(2)(i)]
- 311 [40 CFR 63.174(c)(2)(ii)] Connectors in gas/vapor service or light liquid service (2 inches or less in nominal diameter): Organic HAP monitored by technically sound method within three months after being returned to organic HAP service after having been opened or otherwise had the seal broken. If monitoring detects a leak, implement repair provisions in 40 CFR 63.174(d). Subpart H. [40 CFR 63.174(c)(2)(ii)]
 Which Months: All Year Statistical Basis: None specified
- 312 [40 CFR 63.174(d)] Connectors in gas/vapor service or light liquid service: Make a first attempt at repair no later than 5 calendar days after each leak is detected, and complete repairs no later than 15 calendar days after it each leak is detected, except as provided in 40 CFR 63.171 and 63.174(g). Subpart H. [40 CFR 63.174(d)]
 Connectors in gas/vapor service or light liquid service (unsafe-to-monitor): Demonstrate that the connector is unsafe to monitor because personnel would be exposed to an immediate danger as a result of complying with 40 CFR 63.174(a) through (c). Comply with this requirement instead of the requirements in 40 CFR 63.174(a). Subpart H. [40 CFR 63.174(f)(1)]
 Connectors in gas/vapor service or light liquid service (unsafe-to-monitor): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 at the regulation's specified frequency. Maintain a written plan that requires monitoring of connectors as frequently as practicable during safe to monitor times, but not more frequently than the periodic schedule otherwise applicable. Comply with this requirement instead of the requirements in 40 CFR 63.174(a). Subpart H. [40 CFR 63.174(f)(2)]
 Which Months: All Year Statistical Basis: None specified
- 313 [40 CFR 63.174(f)(1)] Connectors in gas/vapor service or light liquid service (inaccessible, ceramic, or ceramic-lined): Demonstrate that repair personnel would be exposed to an immediate danger as a consequence of complying with 40 CFR 63.174(d). Comply with this requirement instead of the requirements in 40 CFR 63.174(a), (d), and (e). Subpart H. [40 CFR 63.174(g)]
 Connectors in gas/vapor service or light liquid service (inaccessible, ceramic, or ceramic-lined): Make a first attempt at repair within 5 days after leak is detected by visual, audible, olfactory or other means, and complete repairs no later than 15 calendar days after leak is detected, except as provided in 40 CFR 63.171 and 63.174(g). Comply with this requirement instead of the monitoring requirements of 40 CFR 63.174(h)(2) and from the recordkeeping and reporting requirements of 40 CFR 63.181 and 63.182. Subpart H. [40 CFR 63.174(h)(2)]
 Connectors in gas/vapor service or light liquid service: Calculate percent leaking connectors as specified in 40 CFR 63.174(i)(1) and (i)(2). Subpart H. [40 CFR 63.174(i)]

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- 318 [40 CFR 63.180] Comply with the test methods and procedures requirements provided in 40 CFR 63.180. Subpart H.
 Equipment/operational data recordkeeping by electronic or hard copy at the regulation's specified frequency. Maintain records as specified in 40 CFR 63.181(a) through (k). Subpart H.
- 319 [40 CFR 63.181] Submit Periodic Reports: Due semiannually starting 6 months after the Notification of Compliance Status, as required in 40 CFR 63.182(c).
 Include the information specified in 40 CFR 63.182(d)(2) through (d)(4). Subpart H. [40 CFR 63.182(d)]
- 320 [40 CFR 63.182(d)] Equip all rotary pumps and compressors handling volatile organic compounds having a true vapor pressure of 1.5 psia or greater at handling conditions with mechanical seals or other equivalent equipment.
- 321 [LAC 33:III.2111] Comply with 40 CFR 63 Subpart H in accordance with streamlined LDAR fugitives monitoring program defined in Appendix A.

GRP 0006 Emission Cap for Reformers 1, 2, 3, and 6

Group Members: EQT 0004 EQT 0005 EQT 0016 EQT 0036

- 323 [LAC 33:III.501.C.6] For the propose of the operation flexibility, emissions from the reformers, Emission Points 1-71, 1-81, 2-88, and 9-95, shall be limited to no more than the following for each criteria pollutant: CO=31.19 lb/hr, 136.62 TPY; NOx=70.88 lb/hr, 310.45 TPY; PM10=6.41 lb/hr, 28.06 TPY; SO2=0.51 lb/hr, 2.22 TPY; and VOC=6.74 lb/hr, 29.54 TPY. The total emissions for each criteria pollutant shall be calculated and recorded each month, as well as the total emissions for the last twelve months. These records shall be kept on site and available for inspection by the Office of Environmental Compliance, Surveillance Division. Emissions above the cap emission limits for any twelve consecutive month period shall be a violation of this permit and must be reported to the Office of Environmental Compliance, Enforcement Division. A report showing the monthly total emissions for each pollutant, for each month of the preceding semiaannual period, as well as the twelve consecutive month total for each month for the preceding semiaannual period shall be submitted to the Office of Environmental Compliance, Enforcement Division semiannually in accordance with 40 CFR Part 70 General Conditions.

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- 324 [40 CFR 63.] All affected facilities shall comply with all applicable provisions in 40 CFR 63 Subpart A.
- 325 [40 CFR 70.5(a)(1)(iii)] Submit Title V permit application for renewal: Due 6 months before permit expiration date. [40 CFR 70.5(a)(1)(iii)]
- 326 [40 CFR 70.6(a)(3)(iii)(A)] Submit Title V monitoring results report: Due semiannually, by March 31st and September 30th for the preceding periods encompassing July through December and January through June, respectively. Submit reports to the Office of Environmental Compliance, Surveillance Division. Certify reports by a responsible company official. Clearly identify all instances of deviations from permitted monitoring requirements. For previously reported deviations, in lieu of attaching the individual deviation reports, clearly reference the communication(s)/correspondence(s) constituting the prior report, including the date the prior report was submitted. [40 CFR 70.6(a)(3)(iii)(A)]

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- 327 [40 CFR 70.6(a)(3)(iii)(B)] Submit Title V excess emissions report: Due quarterly, by June 30, September 30, December 31, March 31. Submit reports of all permit deviations to the Office of Environmental Compliance, Surveillance Division. Certify all reports by a responsible official in accordance with 40 CFR 70.5(d). The reports submitted on March 31 and September 30 may be consolidated with the semi-annual reports required by 40 CFR 70.6(a)(3)(iii)(A) as long as the report clearly indicates this and all required information is included and clearly delineated in the consolidated report. Unless required by an applicable reporting requirement, a written report is not required during periods in which there is no deviation. [40 CFR 70.6(a)(3)(iii)(B)]
- 328 [40 CFR 70.6(c)(5)(iv)] Submit Title V compliance certification: Due annually, by the 31st of March. Submit to the Office of Environmental Compliance, Surveillance Division. [40 CFR 70.6(c)(5)(v)]
- 329 [40 CFR 82 Subpart F] Comply with the standards for recycling and emissions reduction pursuant to 40 CFR Part 82, Subpart F, except as provided for Motor Vehicle Air Conditioners (MVACs) in Subpart B.
- 330 [LAC 33:III.1.103.] Emissions of smoke which pass onto or across a public road and create a traffic hazard by impairment of visibility as defined in LAC 33:III.1.11
- 331 [LAC 33:III.1.109.B] Emissions of particulate matter which pass onto or across a public road and create a traffic hazard by impairment of visibility or intensify an existing traffic hazard condition are prohibited.
- 332 [LAC 33:III.1.1303.B] Outdoor burning of waste material or other combustible material is prohibited.
- 333 [LAC 33:III.2.113.A] Emissions of organic compounds
- 334 [LAC 33:III.2.19] Maintain best practical housekeeping and maintenance practices at the highest possible standards to reduce the quantity of organic compounds emissions. Good housekeeping shall include, but not be limited to, the practices listed in LAC 33:III.2.113.A.1-5.
- 335 [LAC 33:III.2901.D] Failure to pay the prescribed application fee or annual fee as provided herein, within 90 days after the due date, will constitute a violation of these regulations and shall subject the person to applicable enforcement actions under the Louisiana Environmental Quality Act including, but not limited to, revocation or suspension of the applicable permit, license, registration, or variance.
- 336 [LAC 33:III.2901.F] Discharges of odorous substances at or beyond property lines which cause a perceived odor intensity of six or greater on the specified eight point butanol scale as determined by Method 41 of LAC 33:III.2901.G are prohibited.
- 337 [LAC 33:III.5105.A.1] If requested to monitor for odor intensity, take and transport samples in a manner which minimizes alteration of the samples either by contamination or loss of material. Evaluate all samples as soon after collection as possible in accordance with the procedures set forth in LAC 33:III.2901.G.
- 338 [LAC 33:III.5105.A.2] Do not construct or modify any stationary source subject to any standard set forth in LAC 33:III. Chapter 51. Subchapter A without first obtaining written authorization from DEQ in accordance with LAC 33:III. Chapter 51. Subchapter A, after the effective date of the standard.
- 339 [LAC 33:III.5105.A.3] Do not cause a violation of any ambient air standard listed in LAC 33:III. Table 51 .2, unless operating in accordance with LAC 33:III.5109.B.
- 340 [LAC 33:III.5105.A.4] Do not build, erect, install, or use any article, machine, equipment, process, or method, the use of which conceals an emission that would otherwise constitute a violation of an applicable standard.
- 341 [LAC 33:III.5107.A.2] Do not fail to keep records, notify, report or revise reports as required under LAC 33:III. Chapter 51. Subchapter A.
- Include a certification statement with the annual emission report and revisions to any emission report that attests that the information contained in the emission report is true, accurate, and complete, and that is signed by a responsible official, as defined in LAC 33:III.502. Include the full name of the responsible official, title, signature, date of signature and phone number of the responsible official.

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- 342 [LAC 33:III.5107.A] Submit Annual Emissions Report: Due annually, by the 31st of March unless otherwise directed by DEQ, to the Office of Environmental Assessment in a format specified by DEQ. Identify the quantity of emissions in the previous calendar year for any toxic air pollutant listed in Table 51.1 or Table 51.3.
- 343 [LAC 33:III.5107.B.1] Submit notification: Due to the Department of Public Safety 24-hour Louisiana Emergency Hazardous Materials Hotline at (225) 925-6595 immediately, but in no case later than 1 hour, after any discharge of a toxic air pollutant into the atmosphere that results or threatens to result in an emergency condition (a condition which could reasonably be expected to endanger the health and safety of the public, cause significant adverse impact to the land, water or air environment, or cause severe damage to property).
- 344 [LAC 33:III.5107.B.2] Submit notification: Due to SPOC, except as provided in LAC 33:III.5107.B.6, no later than 24 hours after the beginning of any unauthorized discharge into the atmosphere of a toxic air pollutant as a result of bypassing an emission control device, when the emission control bypass was not the result of an upset, and the quantity of the unauthorized bypass is greater than or equal to the lower of the Minimum Emission Rate (MER) in LAC 33:III.5112, Table 51.1, or a reportable quantity (RQ) in LAC 33:III.393 I, or the quantity of the unauthorized bypass is greater than one pound and there is no MER or RQ for the substance in question. Submit notification in the manner provided in LAC 33:III.3923.
- 345 [LAC 33:III.5107.B.3] Submit notification: Due to SPOC, except as provided in LAC 33:III.5107.B.6, immediately, but in no case later than 24 hours after any unauthorized discharge of a toxic air pollutant into the atmosphere that does not cause an emergency condition, the rate or quantity of which is in excess of that allowed by permit, compliance schedule, or variance, or for upset events that exceed the reportable quantity in LAC 33:III.3931.
- 346 [LAC 33:III.5107.B.4] Submit notification in the manner provided in LAC 33:III.3923.
- 347 [LAC 33:III.5107.B.5] Submit written report: Due by certified mail to SPOC within seven calendar days of learning of any such discharge or equipment bypass as referred to in LAC 33:III.5107.B.1 through B.3. Include the information specified in LAC 33:III.5107.B.4.i through B.4.a.viii.
- 348 [LAC 33:III.535] Report all discharges to the atmosphere of a toxic air pollutant from a safety relief device, a line or vessel rupture, a sudden equipment failure, or a bypass of an emission control device, regardless of quantity, IF THEY CAN BE MEASURED AND CAN BE RELIABLY QUANTIFIED USING GOOD ENGINEERING PRACTICES, to DEQ along with the annual emissions report and where otherwise specified. Include the identity of the source, the date and time of the discharge, and the approximate total loss during the discharge.
- 349 [LAC 33:III.5609.A.1.b] Comply with the Part 70 General Conditions as set forth in LAC 33:III.535 and the Louisiana General Conditions as set forth in LAC 33:III.537. [LAC 33:III.535, LAC 33:III.537]
- 350 [LAC 33:III.5609.A.2.b] Activate the preplanned abatement strategy listed in LAC 33:III.5611. Table 5 when the administrative authority declares an Air Pollution Alert.
- 351 [LAC 33:III.5609.A.3.b] Activate the preplanned strategy listed in LAC 33:III.5611. Table 6 when the administrative authority declares an Air Pollution Warning.
- 352 [LAC 33:III.5609.A] Activate the preplanned abatement strategy listed in LAC 33:III.5611. Table 7 when the administrative authority declares an Air Pollution Emergency.
- 353 [LAC 33:III.5901.A] Prepare standby plans for the reduction of emissions during periods of Air Pollution Alert, Air Pollution Warning and Air Pollution Emergency.
- 354 [LAC 33:III.5907] Design standby plans to reduce or eliminate emissions in accordance with the objectives as set forth in LAC 33:III.5611. Tables 5, 6, and 7.
- Comply with the provisions in 40 CFR 68, except as specified in LAC 33:III.5901.
- Identify hazards that may result from accidental releases of the substances listed in 40 CFR 68.130, Table 59.0 of LAC 33:III.5907, or Table 59.1 of LAC 33:III.5913 using appropriate hazard assessment techniques, design and maintain a safe facility, and minimize the off-site consequences of accidental releases of such substances that do occur.

SPECIFIC REQUIREMENTS

AI ID: 2218 - Praxair Inc - Geismar HYCO Facility
Activity Number: PER20080001
Permit Number: 0180-00031-V3
Air - Title V Regular Permit Major Mod

UNF 0001 UNF0001 - PRAXAIR GEISMAR PLANT

355 [LAC 33:III.5911.A]

Submit registration: Due January 31, 1998, or within 60 days after the source becomes subject to LAC 33:III. Chapter 59, whichever is later.
Include the information listed in LAC 33:III.5911.B, and submit to the Office of Environmental Compliance.

356 [LAC 33:III.5911.C]

Submit amended registration: Due to the Office of Environmental Compliance within 60 days after the information in the submitted registration is no longer accurate.

357 [LAC 33:III.919.D]

Submit Emission Inventory (EI)/Annual Emissions Statement: Due annually, by the 31st of March for the period January 1 to December 31 of the previous year unless otherwise directed. Submit emission inventory data in the format specified by the Office of Environmental Assessment.
Include all data applicable to the emissions source(s), as specified in LAC 33:III.919.A.D.